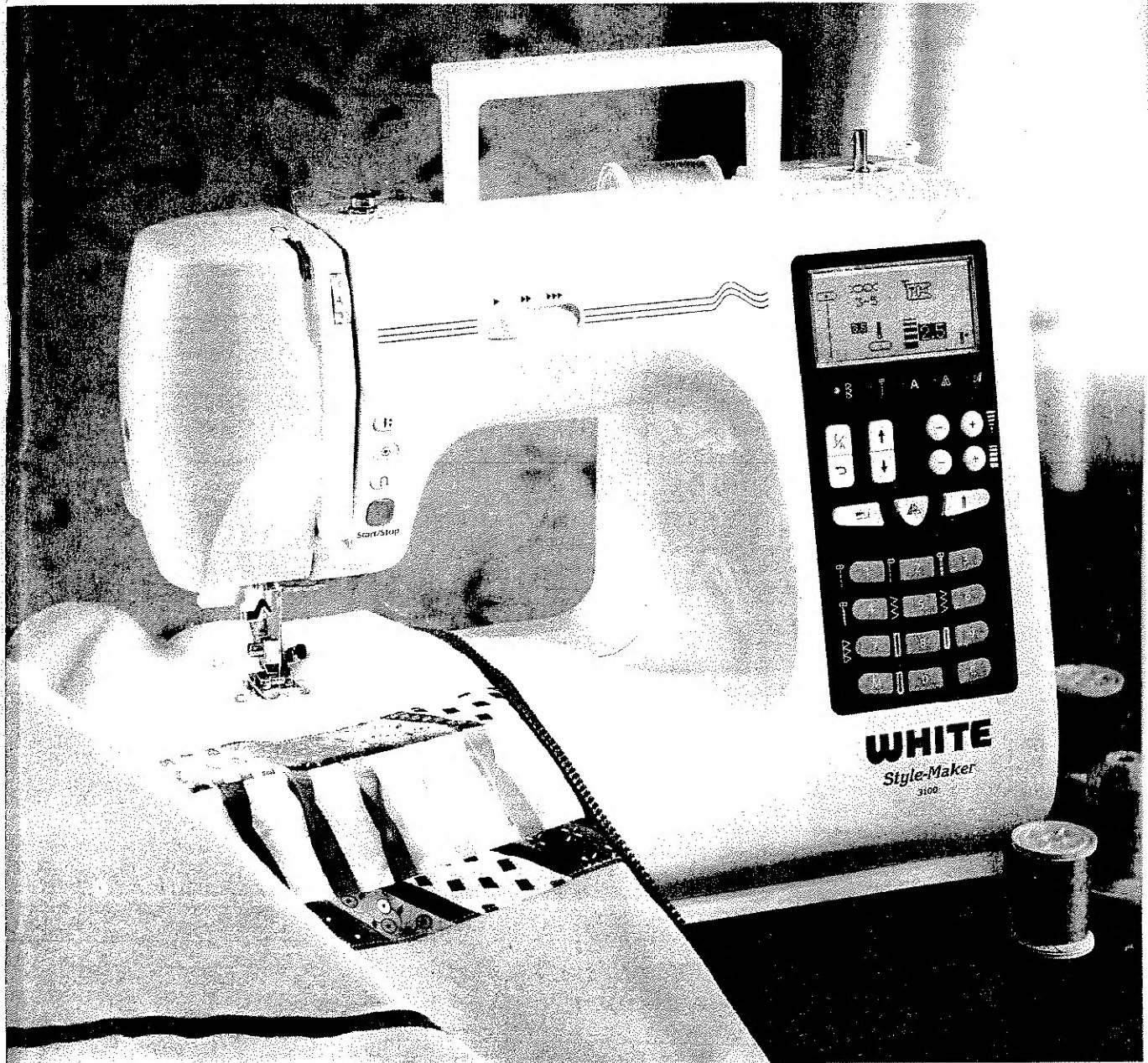


WHITE



Style-Maker

Computerized Sewing Machine

WHITE MODEL 3100 SEWING MACHINE INSTRUCTION BOOK

Call Toll Free 800-331-3164
www.whitesewing.com

■ SYMBOL INSTRUCTIONS



Raise needle



Raise presser foot



Lower presser foot

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety should always be followed, including the following:

Read all instructions before using this sewing machine.

DANGER -To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.
3. Always unplug before re-lamping. Replace bulb with same type rated 5 watts.

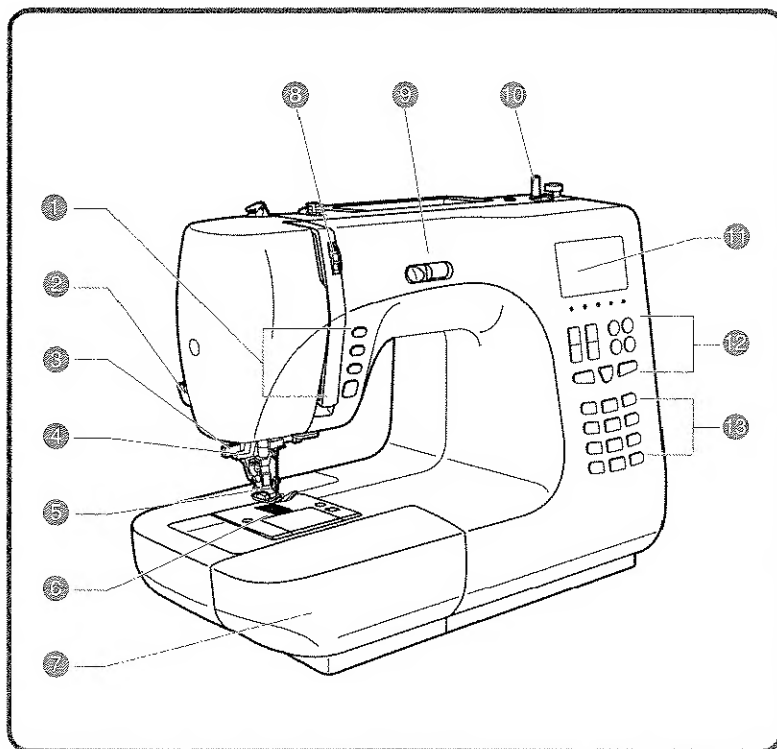
WARNING -To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. Use this appliance only for its intended use as described in this manual. Use only the attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings block. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust, and loose cloth.
5. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper needle plate, a wrong needle plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. Switch the sewing machine off ("O") when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the light.
10. Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol spray products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
16. The sound pressure level under normal operating conditions is 75dB(A).

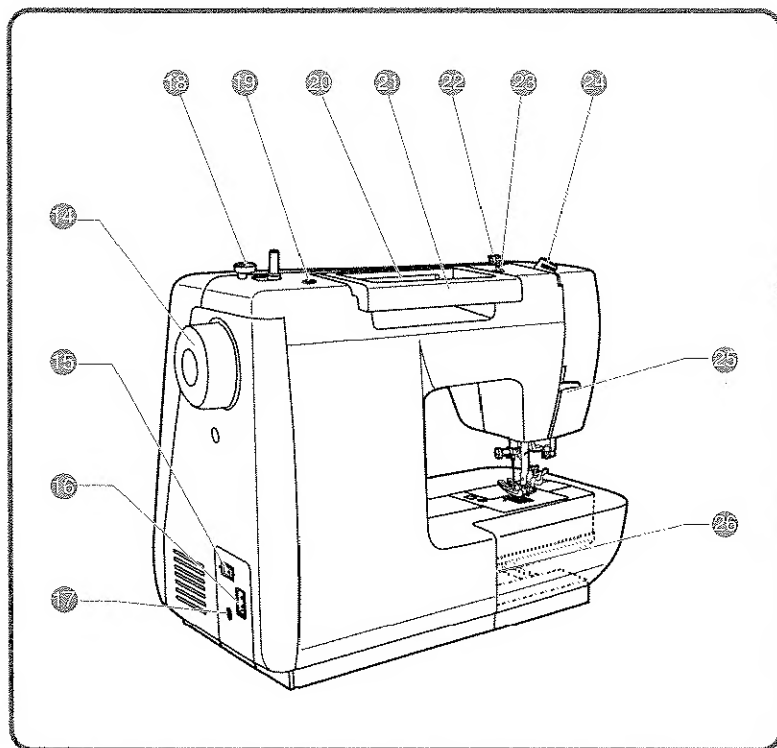
SAVE THESE INSTRUCTIONS

This sewing machine is intended for household use only.

PRINCIPAL PARTS OF THE MACHINE

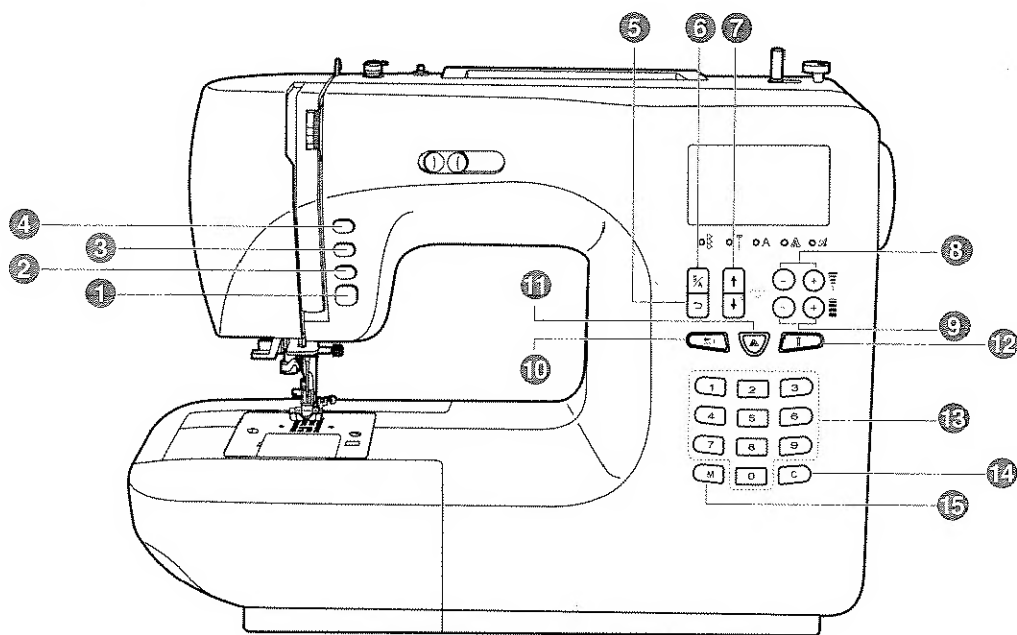


1. Operation buttons **A**
2. Thread cutter
3. Buttonhole lever
4. Auto needle threader
5. Presser foot
6. Needle plate
7. Sewing table and accessory box
8. Tension dial
9. Speed limiting adjustment lever
10. Bobbin winder with on/off switch
11. LCD screen
12. Function buttons **B**
13. Selection buttons **C**



14. Handwheel
15. Main power switch
16. Power cord
17. Foot controller connector
18. Bobbin stopper
19. Hole for second spool pin
20. Horizontal spool pin
21. Handle
22. Bobbin thread guide
23. Upper thread guide
24. Thread take-up lever
25. Presser foot lifter
26. Drop feed lever

BUTTONS OF THE MACHINE



A. Operation buttons (see page 22/23)

1. Start/stop button

Press this button to start or stop the machine.

2. Reverse button

Hold down this button to sew either backwards or a reinforcement stitch at a low speed.

3. Auto-lock button

Hold down this button to sew locking stitches immediately or at the end of the current patterns and automatically stop.

4. Needle up/down position button

Press this button to raise or lower the needle. Pressing the button twice sews one stitch.

B. Function buttons (see page 24/25/26)

5. Return button

Press this button to return to the previous browse display.

The screen for browse display and memory function display can be exchanged in memory mode.

BUTTONS OF THE MACHINE

6. Mode selection button

Press this button to select direct mode, utility and decorative pattern mode, block letter mode, script letter mode and outline letter mode.

7. Arrow button

In the memory mode use these "↑", "↓" buttons to move in the direction when selecting an item displayed on the screen.

Press "↑" button, for selecting previous page, and press "↓" button, for selecting next page in browse display.

8. Stitch width adjustment button

Press these buttons to adjust the width of the zigzag stitch.

9. Stitch length adjustment button

Press these buttons to adjust the length of the stitch.

10. Elongation button

Utility and decorative patterns 24 to 31 can be elongated up to five times its normal length by pressing this button.

11. Mirror button

Press this button to sew a reflection pattern.

12. Twin needle button

Press this button to fix the width range when using the twin needle to sew.

C. Selection buttons (see page 27/28)

13. Direct pattern selection and number buttons

Use these buttons to quickly select one of 10 of the most often used stitch. When the mode button is set at the Direct mode. Or press number buttons of the pattern number to select the desired pattern.

14. Clear button

If an incorrect pattern is selected or memorized, pressing this button will clear it.

15. Memory button

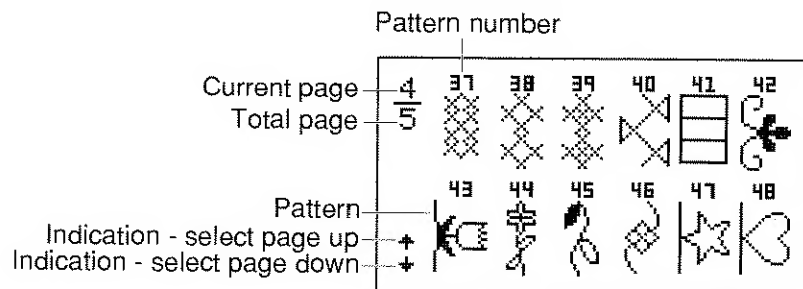
Press this button to enter or store the created pattern combination in the memory.

LCD SCREEN

The LCD screen, located on the front at the right of the sewing machine, displays the settings for the selected stitch and error messages if operations are performed incorrectly.

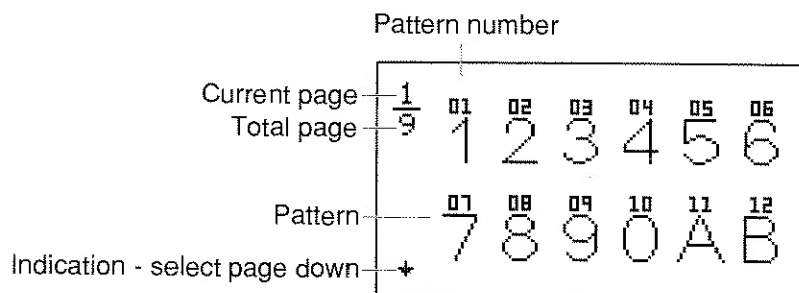
✿ Browse display - Pattern

For reviewing all patterns and then selecting any ones for sewing.

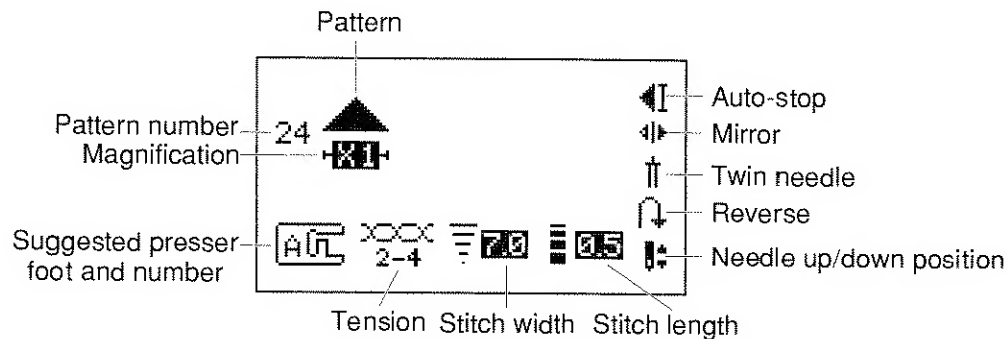


✿ Browse display - Alphabet

For reviewing all patterns and then selecting any ones for sewing.



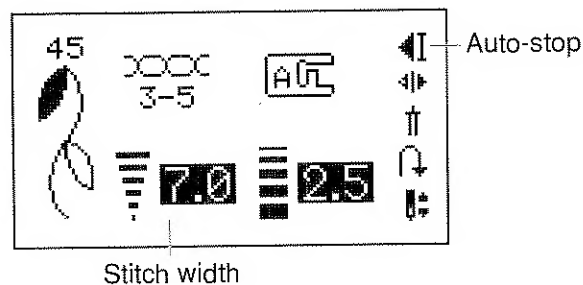
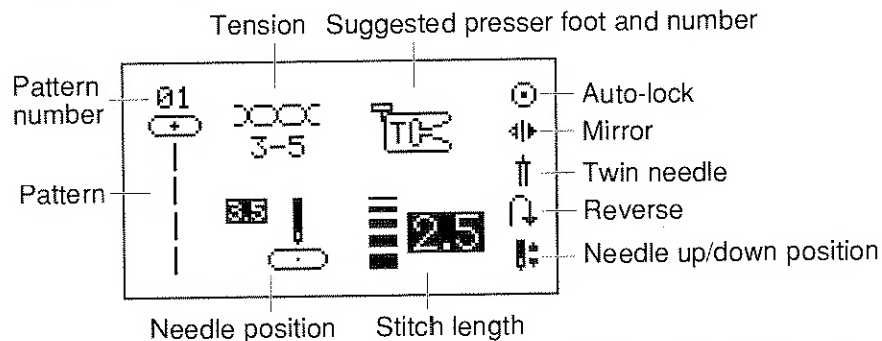
✿ Elongation



LCD SCREEN

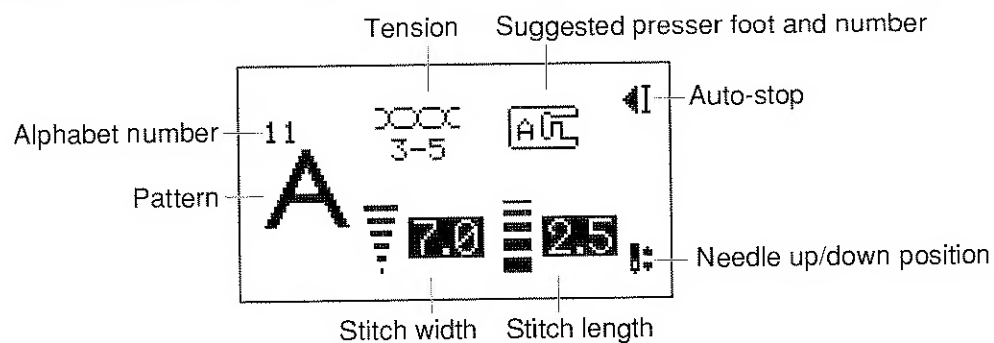
Normal display - Pattern

For setting the functions of Auto lock, mirror, twin needle, reverse and so on. Press the " Start/stop " button for starting sewing.

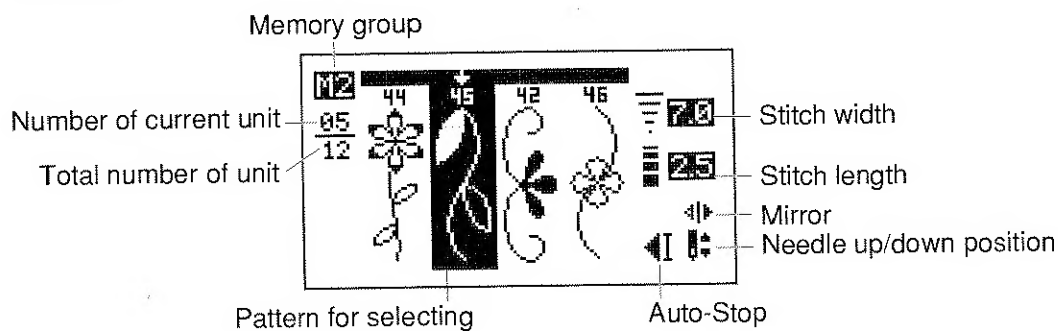


Normal display - Alphabet

For setting the functions of Auto-Stop. Press the " Start/stop " button for starting sewing.



Memory



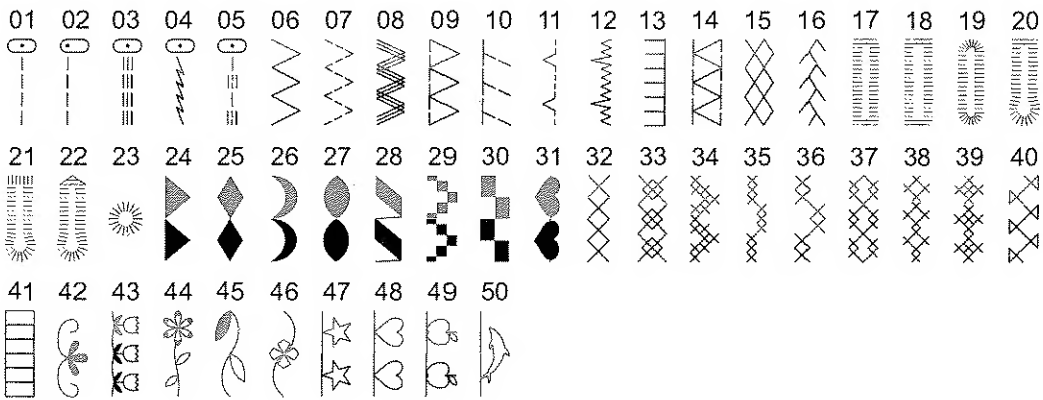
PATTERN CHART

The portion marked in colored on the chart below shows the one unit of each pattern.

Direction Patterns



Patterns

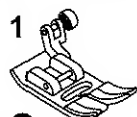


Alphabets

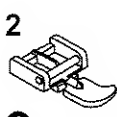
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	1	2	3	4	5	6	7	8	9	0
Block style	11	12	13	14	15	16	17	18	19	20
	A	B	C	D	E	F	G	H	I	J
	21	22	23	24	25	26	27	28	29	30
	K	L	M	N	O	P	Q	R	S	T
	31	32	33	34	35	36	37	38	39	40
Outline style	a	b	c	d	e	f	g	h	i	j
	41	42	43	44	45	46	47	48	49	50
	k	l	m	n	o	p	q	r	s	t
	51	52	53	54	55	56	57	58	59	60
	u	v	w	x	y	z				
Script style	61	62	63	64	65	66	67	68	69	70
	Ä	Å	Æ	Ñ	Ö	Ø	Ç	Ù	À	Á
	71	72	73	74	75	76	77	78	79	80
	ä	å	æ	ñ	ö	ø	ç	ù	à	á
	81	82	83	84	85	86	87	88	89	90
Script style	91	92	93	94	95	96	97			
	?	!	-	'	,	.	-	()	
	98	99	00	01	02	03	04	05	06	07
	1	2	3	4	5	6	7	8	9	0
	08	09	10	11	12	13	14	15	16	17
Script style	18	19	20	21	22	23	24	25	26	27
	A	B	C	D	E	F	G	H	I	J
	28	29	30	31	32	33	34	35	36	37
	K	L	M	N	O	P	Q	R	S	T
	38	39	40	41	42	43	44	45	46	47
Script style	48	49	50	51	52	53	54	55	56	57
	a	b	c	d	e	f	g	h	i	j
	58	59	60	61	62	63	64	65	66	67
	k	l	m	n	o	p	q	r	s	t
	68	69	70	71	72	73	74	75	76	77
Script style	78	79	80	81	82	83	84	85	86	87
	u	v	w	x	y	z				
	88	89	90	91	92	93	94	95	96	97
	?	!	-	'	,	.	-	()	
	98	99	00	01	02	03	04	05	06	07

ACCESSORIES

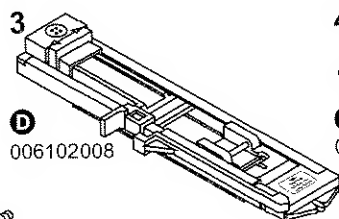
Standard



T
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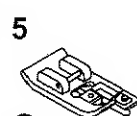
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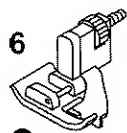
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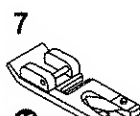
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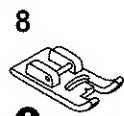
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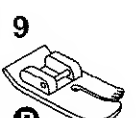
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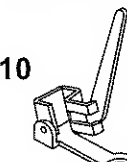
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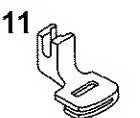
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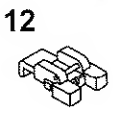
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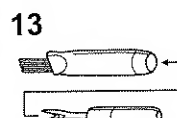
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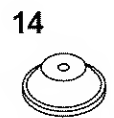
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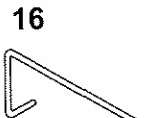
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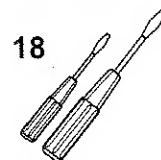
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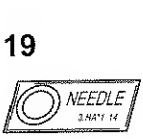
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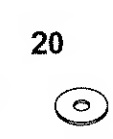
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R60033210



006020008

Standard

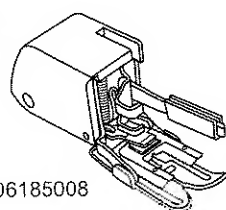
1. All purpose foot (T)
2. Zipper foot (I)
3. Buttonhole foot (D)
4. Cording foot (M)
5. Overcasting foot (E)
6. Blind hem foot (F)
7. Hemmer foot (K)
8. Satin stitch foot (A)
9. Quilting foot (P)
10. Darning/ Embroidery foot
11. Gathering foot
12. Button sewing foot
13. Brush/ Seam ripper
14. Spool holder (Large)
15. Spool holder (Small)
16. Seam guide
17. Bobbin(3x)
18. Screwdriver (L & S)
19. Pack of needle
20. Spool pin felt
21. Second spool pin
22. Twin needle

Optional

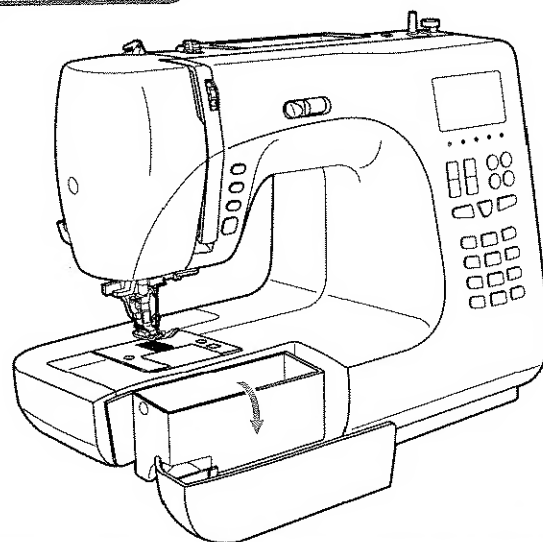
23. Walking foot

Optional

23



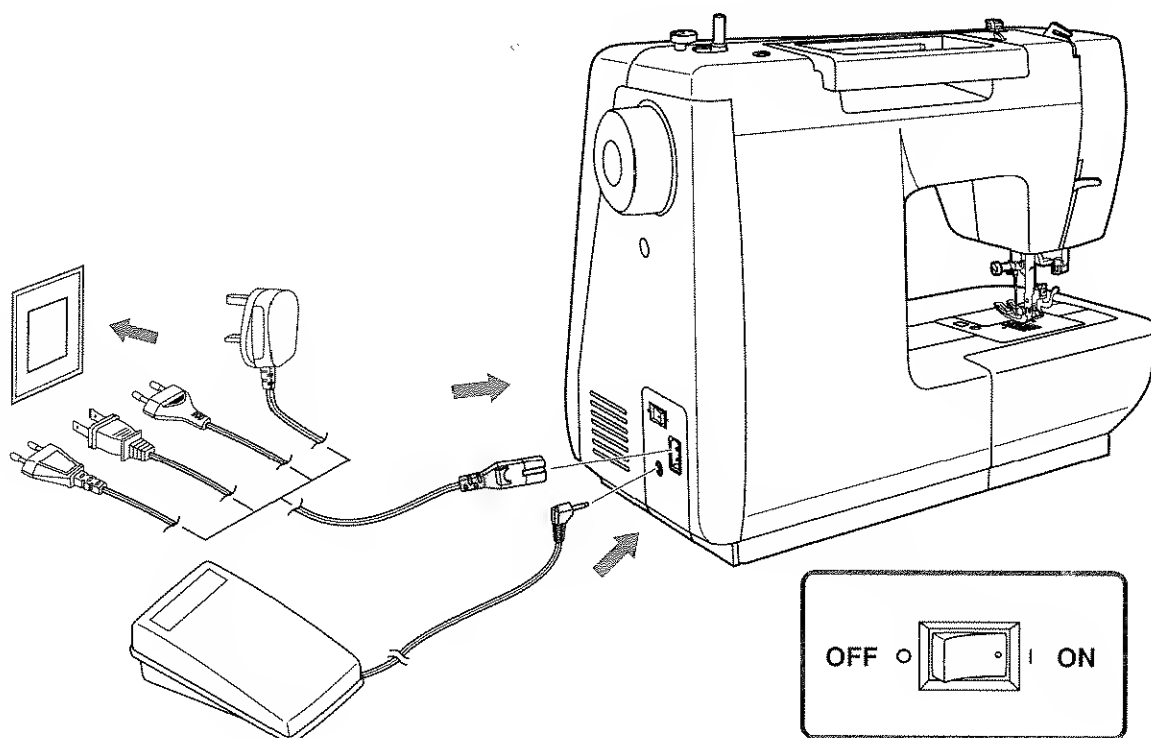
006185008



CONNECTING THE MACHINE TO THE POWER SOURCE



Caution: Always make sure that the machine is unplugged from power source and the main switch is on "O", when the machine is not in use and before inserting or removing parts.



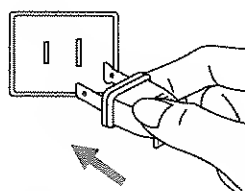
Connecting the machine

Before connecting the power supply, make sure that the voltage and frequency shown on the machine is conforming with your electrical power.

Place the machine on a stable table.

1. Connect the power line cord to the machine by inserting the 2-hole plug into the terminal box.
2. Connect the power line plug to the electric outlet.
3. Turn on the power switch.
4. The sewing lamp will light up when the switch is turned on.

To disconnect, turn the power switch to the off position, then remove plug from outlet.

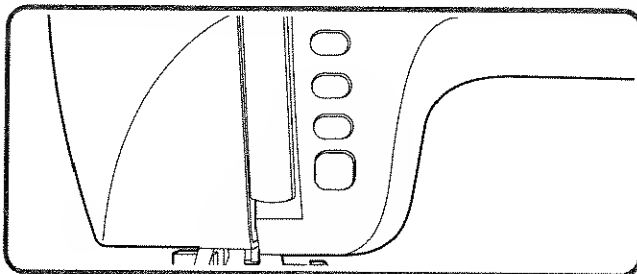


Polarized plug information

This appliance has a polarized plug (one blade wider than the other), to reduce the risk of electrical shock; this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not modify the plug in any way.

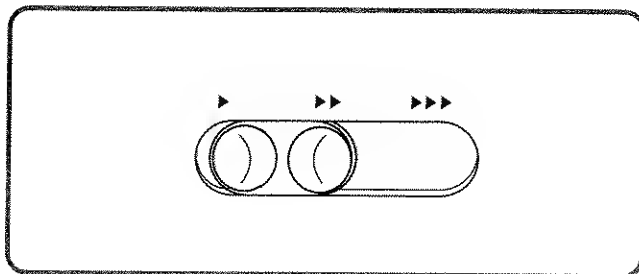
STARTING SEWING

Start/stop button



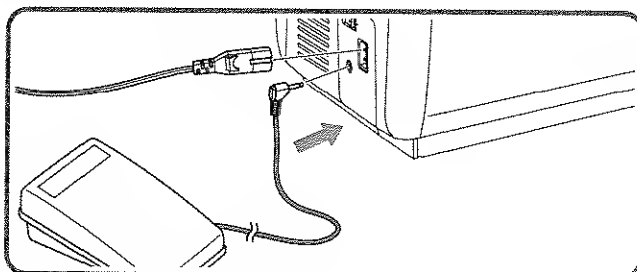
The machine will start running when Start/stop button is pressed and will stop when pressed the second time.

The machine will rotate slowly at start of sewing.

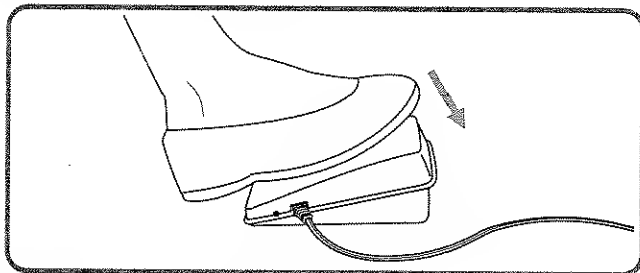


The speed limiting adjustment lever can control the sewing speed. To increase the speed, slide the lever to the right. To decrease the sewing speed, slide the lever to the left.

Foot control



With the sewing machine turned off, insert the foot control plug into its connector on the sewing machine.



Turn on the sewing machine, and then slowly depress the foot control to start sewing.

Release the foot control to stop the sewing machine.



Please Note: The setting of the speed limiting adjustment lever will limit the maximum speed of the machine.



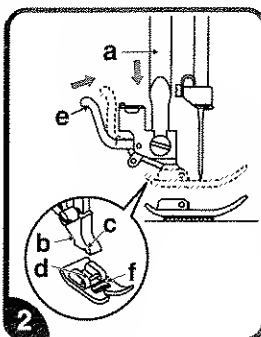
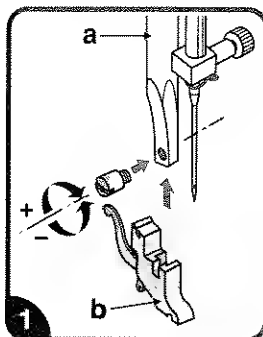
Attention: Consult a qualified electrician if in doubt as how to connect the machine to the power source. Unplug the power cord when the machine is not in use.

The appliance must be used with the foot controller C-9000 manufactured by CHIEN HUNG TAIWAN., LTD.

CHANGING THE PRESSER FOOT



Attention: Turn power switch to off ("O") when carrying out any of the above operations!



Attaching the presser foot holder (1)

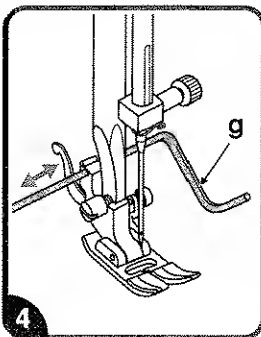
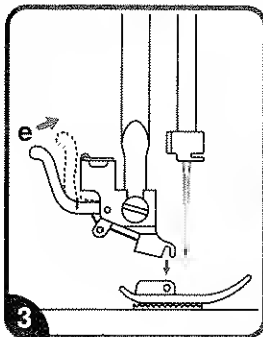
Raise the presser foot bar (a). Attach the presser foot holder (b) as illustrated.

Attaching the presser foot (2)

Lower the presser foot holder (b) until the cut-out (c) is directly above the pin (d).

Raise the lever (e).

Lower the presser foot holder (b) and the presser foot (f) will engage automatically.



Removing the presser foot (3)

Raise the presser foot.

Raise the lever (e) and the foot will disengage.

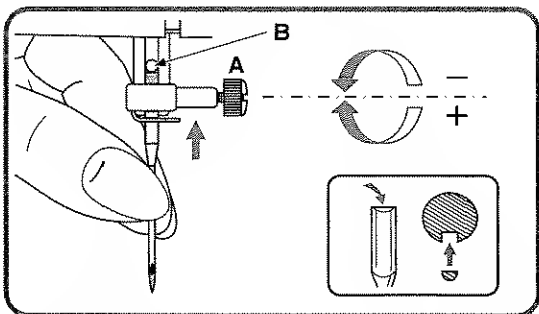
Attaching the seam guide (4)

Attach the seam guide (g) in the slot as illustrated. Adjust according to need for hems, pleats, etc.

REPLACING THE NEEDLE



Attention: Turn power switch to off. ("O") when carrying out any of the above operations!



Change the needle regularly, especially if it is showing signs of wear and causing problems.

Insert the needle following the illustrated instructions.

A. Loosen the needle clamp screw and tighten again after inserting the new needle.

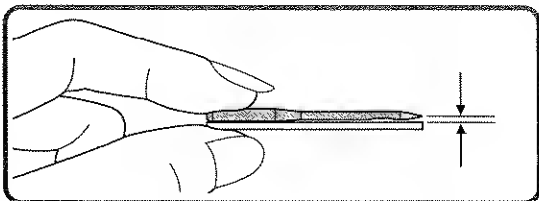
The flat side of the shaft should be towards the back.

B. Insert the needle as far up as it will go.

Needles must be in perfect condition.

Problems can occur with:

- Bent needles
- Blunt needles
- Damaged points



MATCHING NEEDLE/ FABRIC/ THREAD

NEEDLE, FABRIC, THREAD SELECTION GUIDE

NEEDLE SIZE	FABRICS	THREAD
9-11 (70-80)	Lightweight fabrics-thin cottons, voile, serge, silk, muslin, Qiana, interlocks, cotton knits, tricot, jerseys, crepes, woven polyester, shirt & blouse fabrics.	Light-duty thread in cotton, nylon, polyester or cotton wrapped polyester.
11-14 (80-90)	Medium weight fabrics-cotton, satin, kettleclote, sailcloth, double knits, lightweight woollens.	Most threads sold are medium size and suitable for these fabrics and needle sizes. Use polyester threads on synthetic materials and cotton on natural woven fabrics for best results. Always use the same thread on top and bottom.
14 (90)	Medium weight fabrics-cotton duck, woolen, heavier knits, terrycloth, denims.	
16 (100)	Heavyweight fabrics-canvas, woollens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).	
18 (110)	Heavy woollens, overcoat fabrics, upholstery fabrics, some leathers and vinyls.	Heavy duty thread, carpet thread.


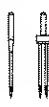

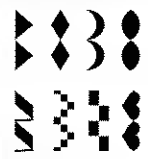
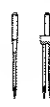






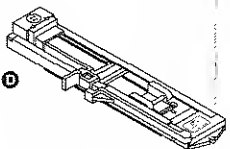


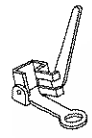







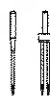

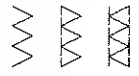







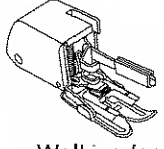






Please Note:

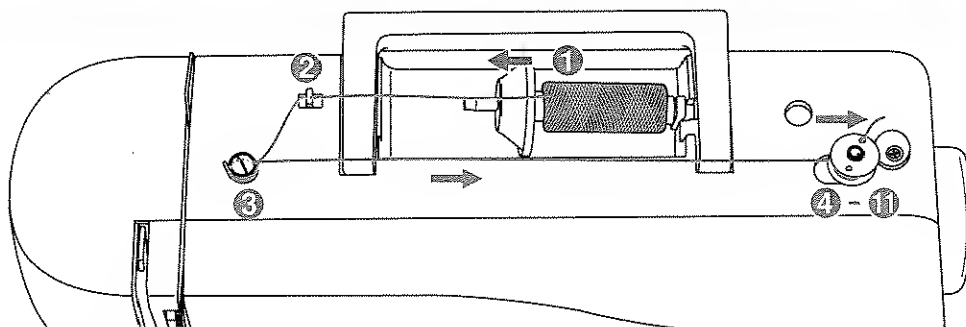
- In general, fine threads and needles are used for sewing fine fabrics, and thicker threads are used for sewing heavy fabrics.
- Always test thread and needle size on a small piece of fabric which will be used for actual sewing.
- Use the same thread for needle and bobbin.

TYPE OF PRESSER FOOT CHART

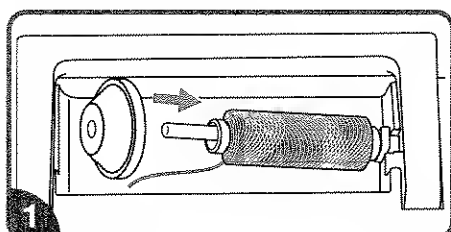
(Double needle is being suggested for certain stitches for more creativity)

PRESSER FOOT	APPLICATION	NEEDLE	PRESSER FOOT	APPLICATION	NEEDLE
 All purpose foot (T)	General sewing, Patchwork stitches, Decorative stitching, Smocking, Fagoting, etc.		 Satin stitch foot (A)	Satin stitch 	
 Zipper foot (I)	Inserting zippers 		 Quilting foot (P)	Quilting 	
 Buttonhole foot (D)	Buttonhole sewing 		 Darning/ Embroidery foot	Darning Free embroidery Monogramming 	
 Cording foot (M)	Cording 		 Gathering foot	Gathering 	
 Overcasting foot (E)	Overcasting 		 Button sewing foot	Button sewing 	
 Blind hem foot (F)	Blind hem stitching 		 Walking foot (Optional)	This foot helps to prevent uneven feeding of very difficult fabrics	
 Hemmer foot (K)	Narrow hemming 				

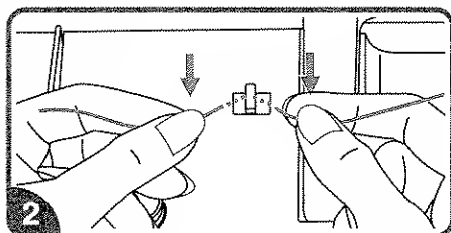
WINDING THE BOBBIN



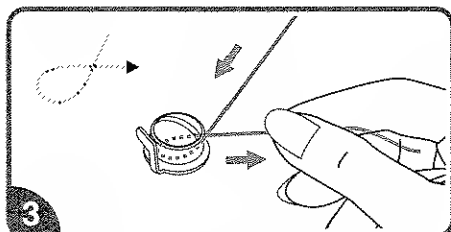
Bobbin winding



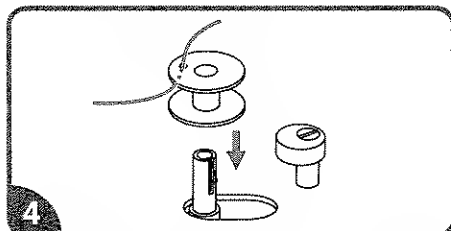
1. Place the thread and spool holder onto the spool pin. For smaller spools of thread, place spool holder with the small side next to the spool or use the small spool holder.



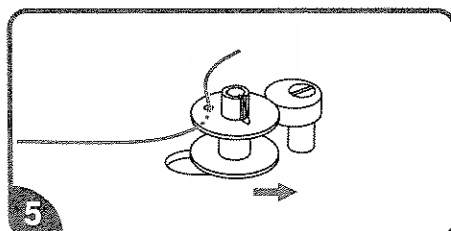
2. Snap the thread into the thread guide.



3. Wind the thread clockwise around the bobbin winder tension discs.

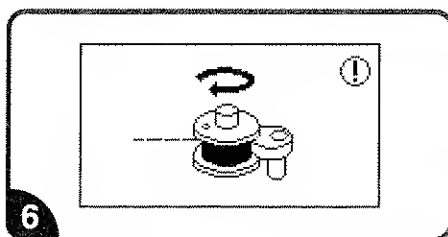


4. Thread bobbin as illustrated and place on spindle.

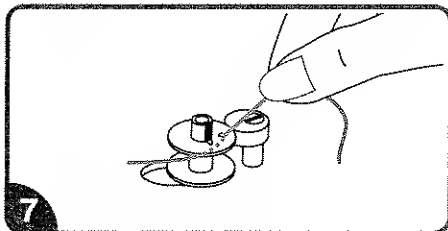


5. Push bobbin to right.

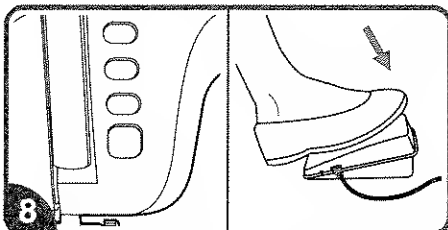
WINDING THE BOBBIN



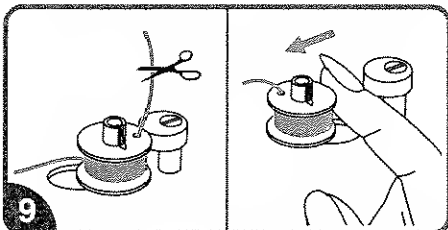
6. When the bobbin winder switch is pressed to the left, LCD will display the animation of bobbin winding, press the engaging lever to right, the animation disappear, LCD display the frame of ordinary operating.



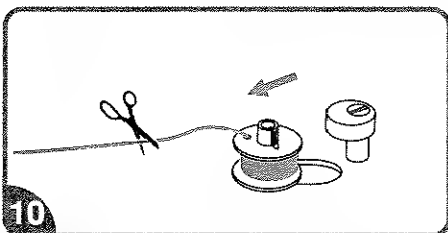
7. Hold the thread tail securely in one hand.



8. Press the Start/stop button or foot control.



9. After the bobbin has wound a few turns stop the machine and cut the thread near the hole of the bobbin. Set the speed to maximum. Continue filling the bobbin until it is full. The motor stops automatically when the bobbin is full. Stop the machine.



10. Cut the thread and then remove the bobbin.



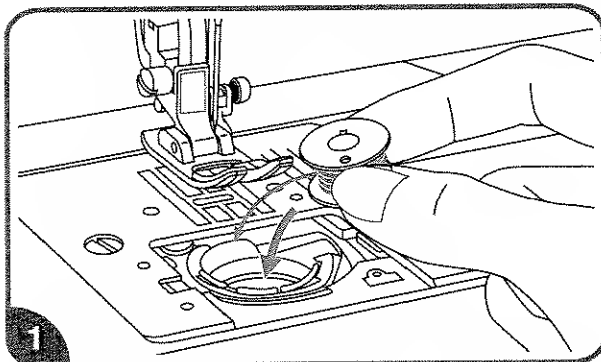
Please Note: When the bobbin winder switch is placed on the right, "bobbin winding position", the machine will not sew and the handwheel will not turn. To start sewing, push the bobbin winder switch to the left "sewing position".

INSERTING THE BOBBIN

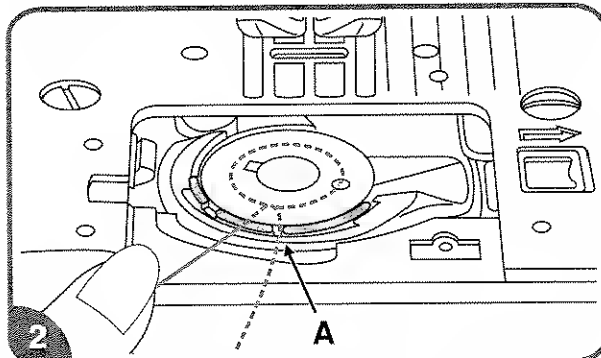


Attention: Turn power switch to off ("O") before inserting or removing the bobbin.

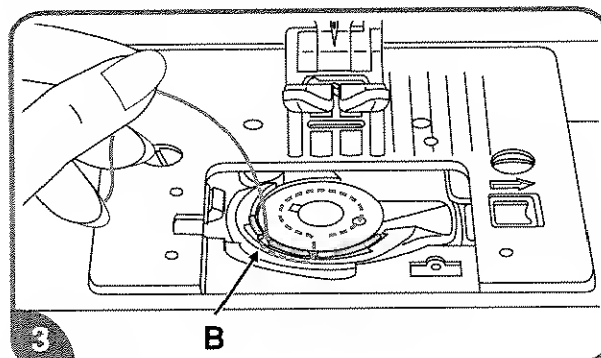
When inserting or removing the bobbin, the needle must be fully raised.



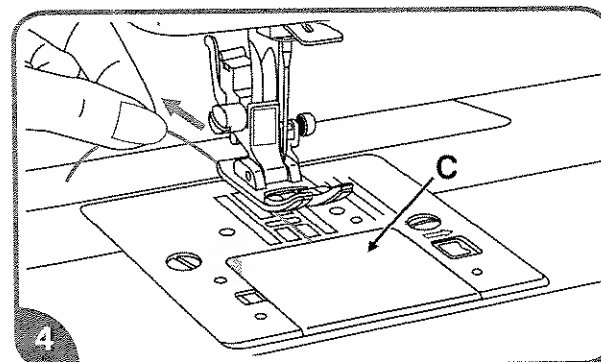
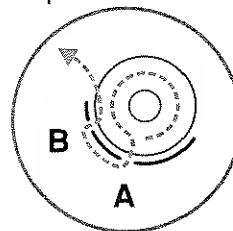
1. Insert the bobbin in the bobbin case with the thread running in a counterclockwise direction (arrow).



2. Pull the thread through the slit (A).

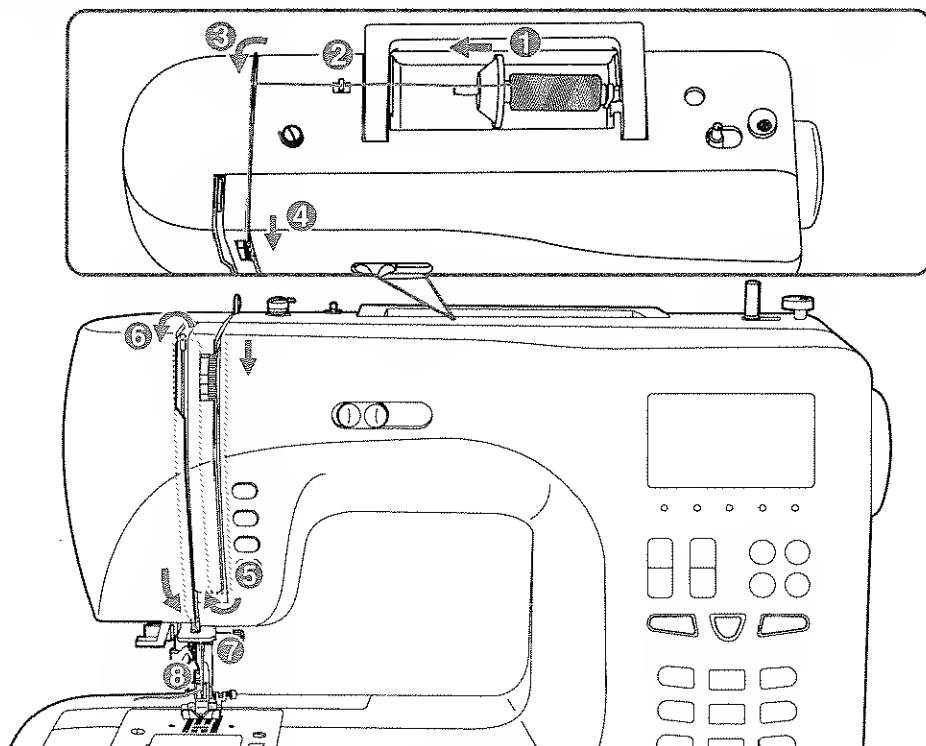


3. Pull the thread toward the left and along the inside of the spring until it slips into the notch (B) being sure that the thread does not slip out of the slit (A).

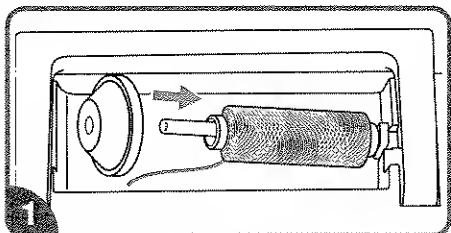


4. Pull out about 15 cm (6 inches) of thread and attach the bobbin cover plate. (C)

THREADING THE UPPER THREAD

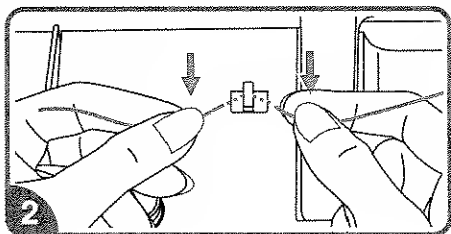


Please Note: It is important to carry out the threading correctly as by not doing so several sewing problems could result.

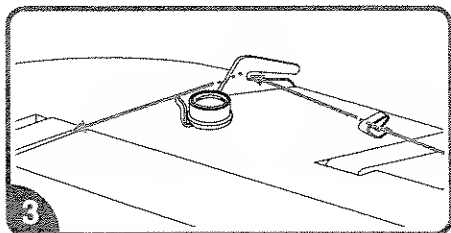


Start by raising the needle to its highest point, and also raise the presser foot to release the tension discs.

1. Lift up the spool pin. Place the spool of thread on the spool pin so that the thread comes from the front of the spool, then place the spool cap at the end of the spool pin.

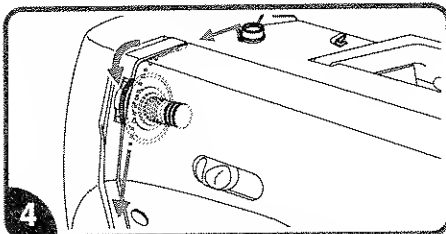


2. Draw the thread from the spool through the upper thread guide.

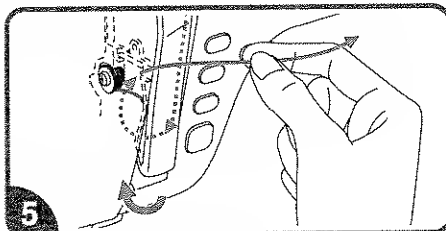


3. Guide the thread around the thread guide pulling the thread through the pre-tension spring as illustrated.

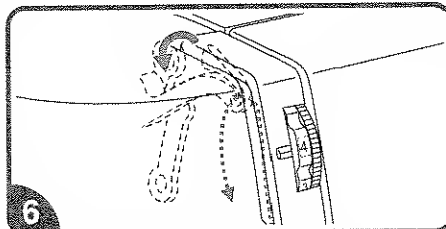
THREADING THE UPPER THREAD



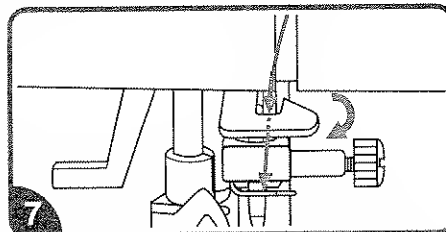
4. Thread the tension module by passing the thread between the silver discs.



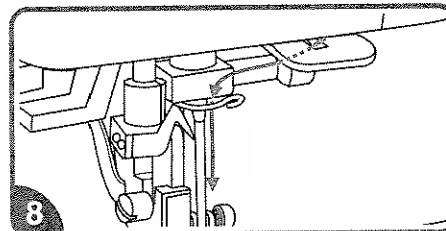
5. Then, down and around the check spring holder.



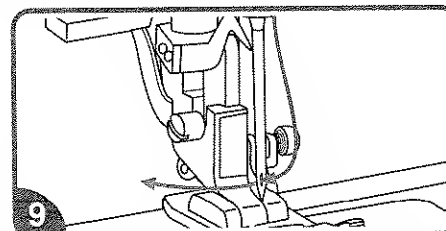
6. At the top of this movement, pass the thread from right to the left through the slotted eye of the take-up lever and then downwards again.



7. Pass the thread behind the flat, horizontal thread guide.



8. Guide the thread through the wire loop.



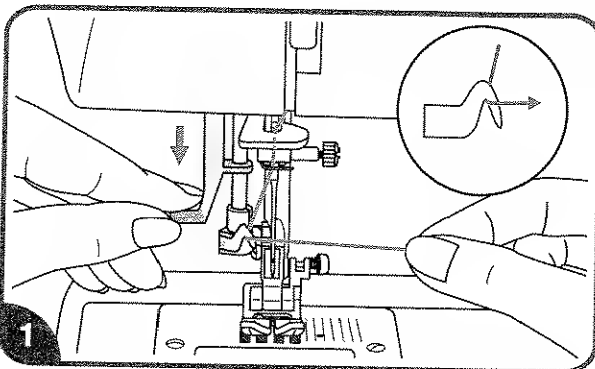
9. Pull the end of the thread through the needle from front to rear, and pull out about 10 cm of thread.

Use the needle threader to thread the needle. (On the next page.)

USING THE NEEDLE THREADER

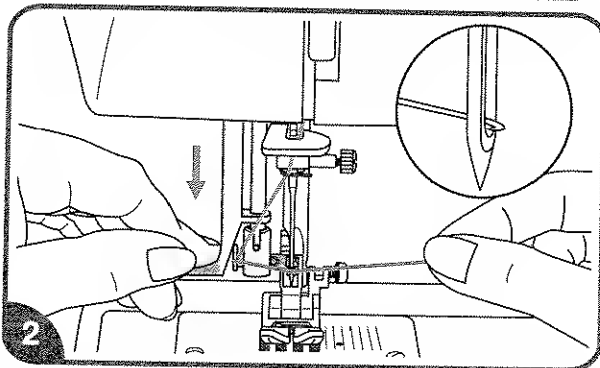


Attention: Turn power switch to the off position ("O").

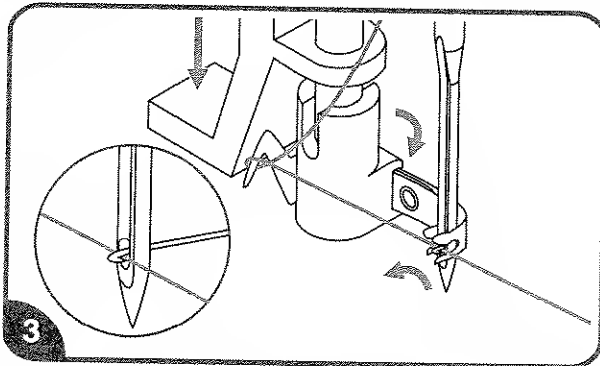


Raise the needle to its highest position and lower the presser foot.

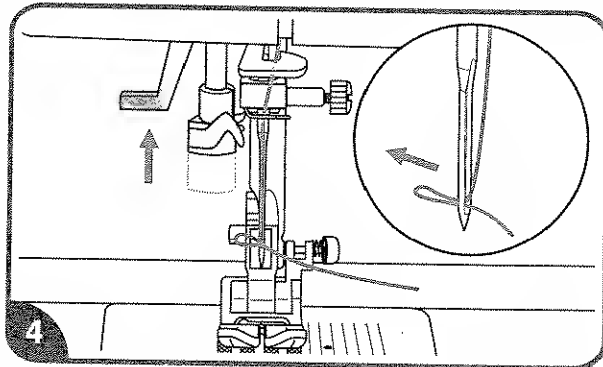
1. Lower the needle threader lever slowly and draw the thread through the thread guide as illustrated and then to the right.



2. The needle threader automatically turns to the threading position and the hook pin passes through the needle eye.



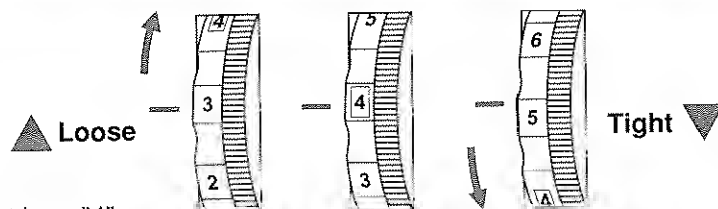
3. Take the thread in front of the needle.



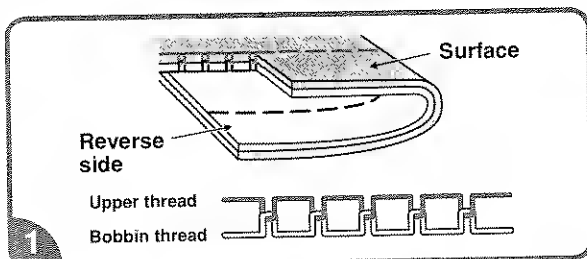
4. Hold the thread loosely and release the lever slowly. The hook will turn and pass the thread through the needle eye forming a loop.

Pull the thread through the needle eye.

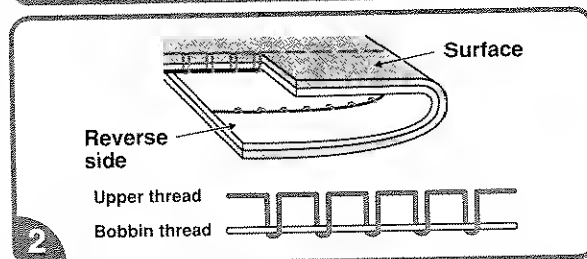
THREAD TENSION



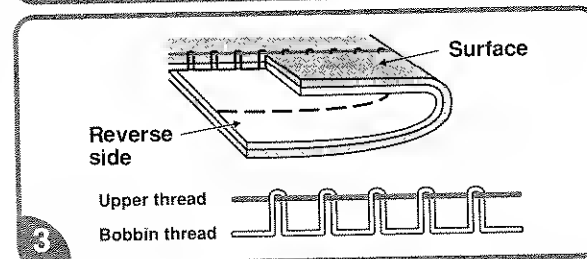
- Basic thread tension setting: "4"
- To increase the tension, turn the dial to the next number up. To reduce the tension, turn the dial to the next number down.
- Proper setting of tension is important to good sewing.
- There is no single tension setting appropriate for all the stitch functions and fabrics.
- 90% of all sewing will be between "3" and "5" ("4" is basic setting).
- For all decorative sewing you will always obtain a nicer stitch and less fabric puckering when the upper thread appears on the bottom side of your fabric.



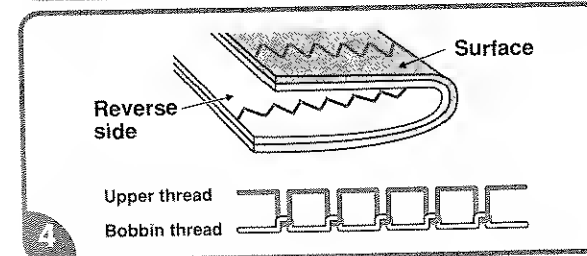
1. Normal thread tension for straight stitch sewing.



2. Thread tension is too loose for straight stitch sewing. Turn dial to higher number.

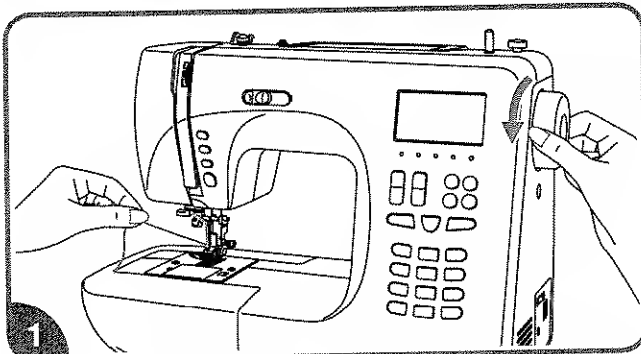


3. Thread tension is too tight for straight stitch sewing. Turn dial to lower number.

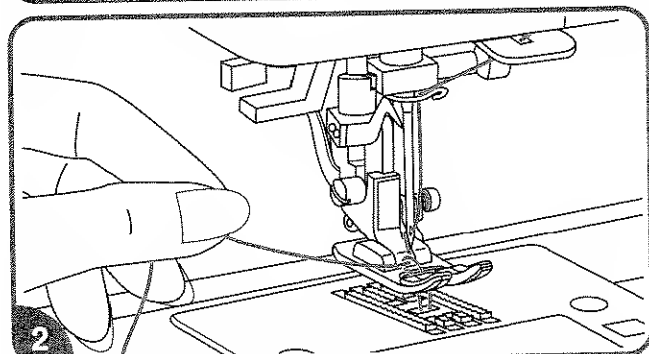


4. Normal thread tension for zig zag and decorative sewing.

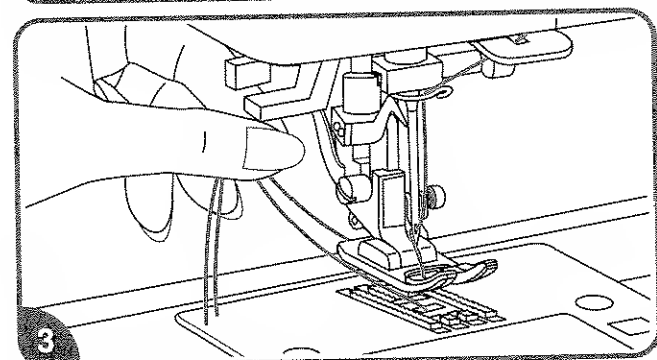
RAISING UP THE LOWER THREAD



1. Hold the upper thread with the left hand. Turn the handwheel towards you (counterclockwise) lowering, then raising the needle.

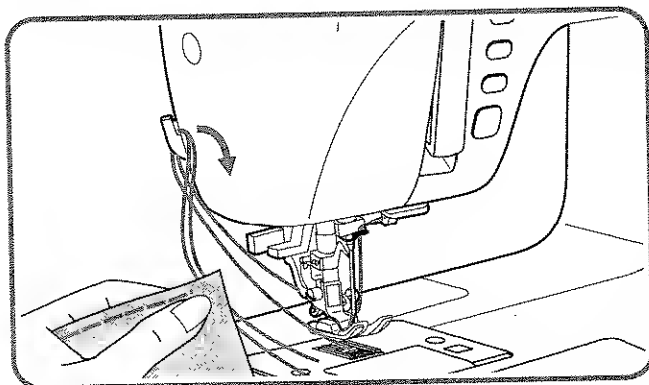


2. Gently pull on the upper thread to bring the bobbin thread up through the needle plate hole. The bobbin thread will come up in a loop.



3. Pull both threads to the back under the presser foot.

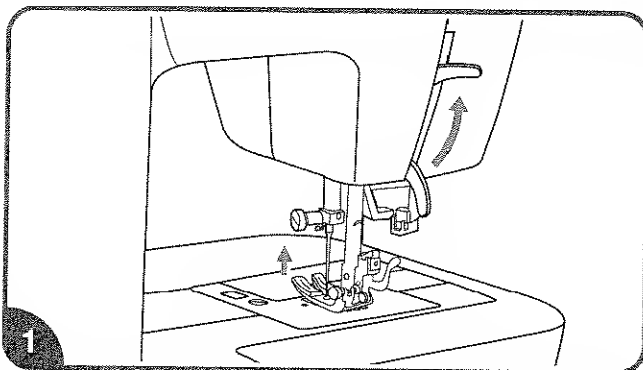
CUTTING THE THREAD



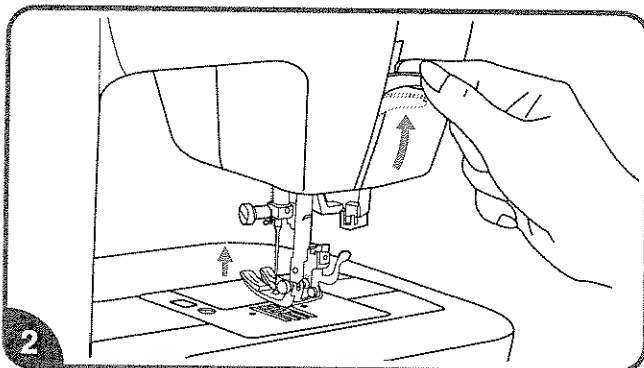
Raise the presser foot. Remove the fabric, draw the threads to the left side of the face cover and cut using the thread cutter.

The threads are cut at the proper length to start the next seam.

TWO-STEP PRESSER FOOT LIFTER

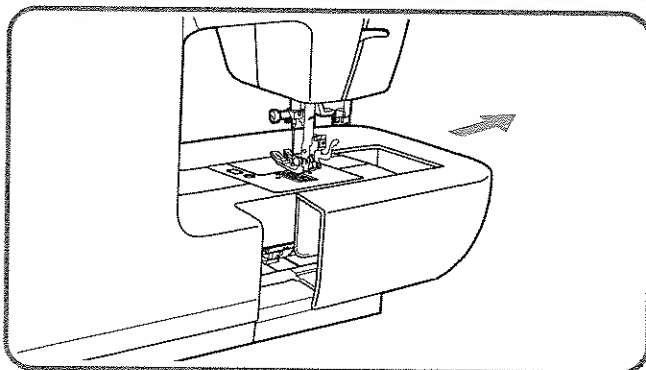


1. The presser foot lifter raises and lowers your presser foot.

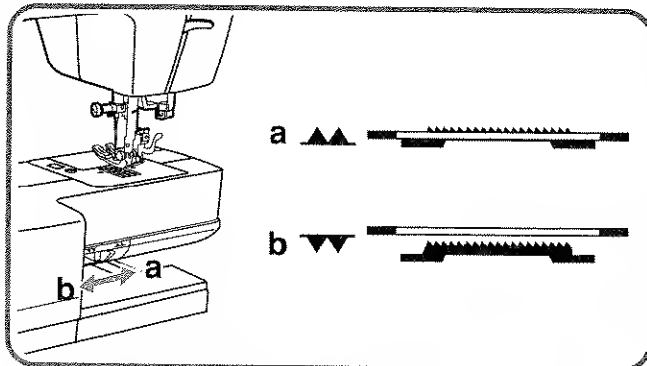


2. When sewing several layers or thick fabrics, the presser foot can be raised a second stage for easy positioning of the work.

TO RAISE OR DROP THE FEED DOGS



With the sewing table off the machine, the feed dog adjustment lever can be seen on the base in back of the sewing machine.



Sliding the lever to the "▼" (b) will lower the feed dog, for example during button sewing.

If you wish to continue sewing normally, slide the lever to the "▲" (a) in order to raise the feed dogs.

The feed dog will not rise up if you do not turn the handwheel, even if the lever is slid to the right. Make a complete turn to raise the feed dogs.

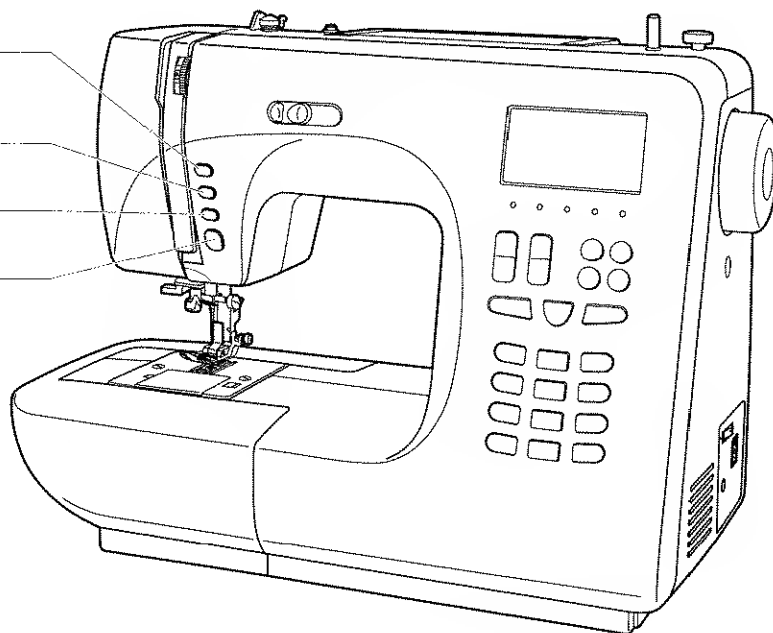
OPERATION BUTTONS

Needle up/down
position button

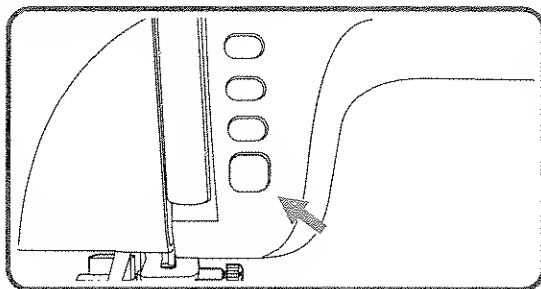
Auto-lock button

Reverse button

Start/stop button



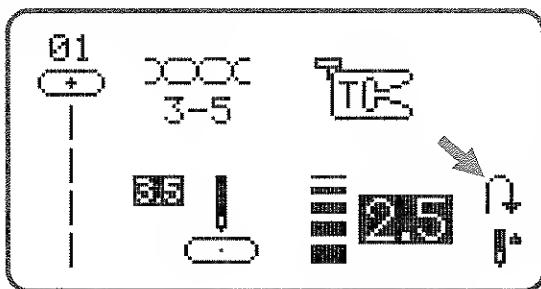
Start/stop button



The machine will start running when start/stop button is pressed and will stop when pressed the second time. The machine will rotate slowly at the beginning of the sewing.

The sewing speed can be controlled by the speed limiting adjustment lever.

Reverse button



When utility and decorative patterns 01-16, 24-50 are selected, the machine will sew reverse or a reinforcement stitch at a low speed if the reverse button is pressed. The machine will sew forward after the button is released.

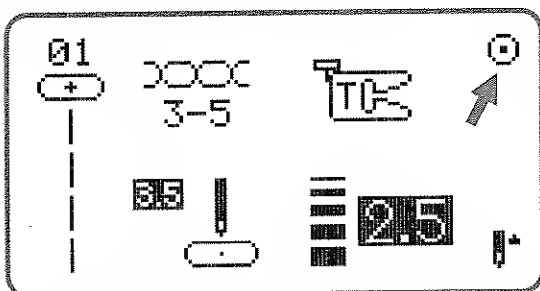
An arrow "↕" on the LCD display indicates reverse sewing.



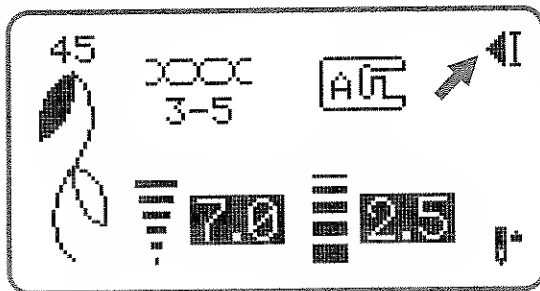
Please Note: Reverse button function will be available when machine is sewing only.

OPERATION BUTTONS

◆ Auto-lock button



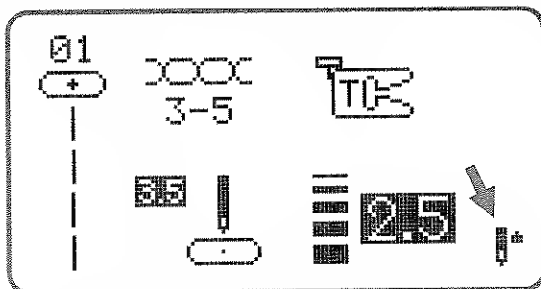
When utility and decorative patterns 01-05 are selected, the machine will immediately sew 3 locking stitches when the Auto-lock button is pressed, then automatically stop. The LCD will display the figure "⊕" until the machine is stopped.



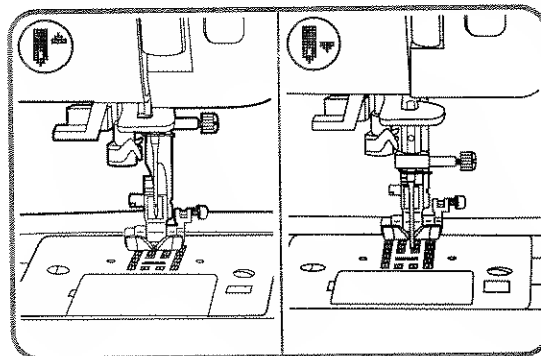
When utility and decorative patterns 06-16, 24-50 are selected, press the Auto-lock button, the machine will sew 3 locking stitches at the end of the current pattern and automatically stop. The LCD will display the figure "⬇" until the machine is stopped.

The function will be cancelled if you press the button once again or select another pattern.

◆ Needle up/ down position button

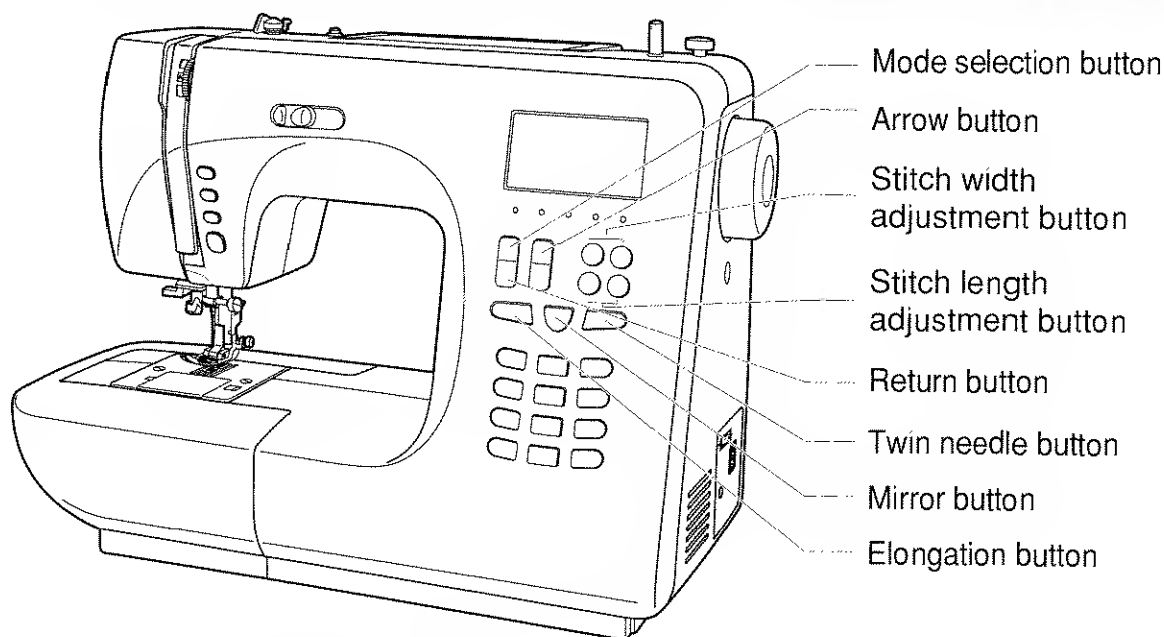


With the Needle up/ down position button, you decide whether the needle shall stop in the up position or in the material when you stop sewing.

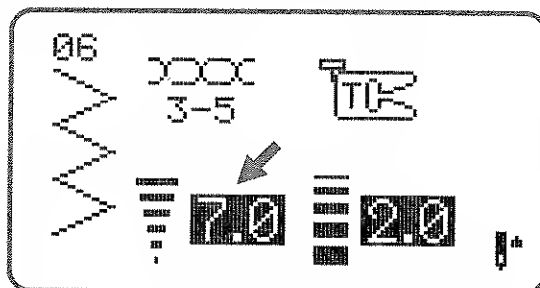


Press the button so that the arrow, on the LCD screen, will point upward "⬆" and the needle will stop in the highest position. When you press the button so that the arrow points downward "⬇", the machine will stop with the needle in the lowest position.

FUNCTION BUTTONS

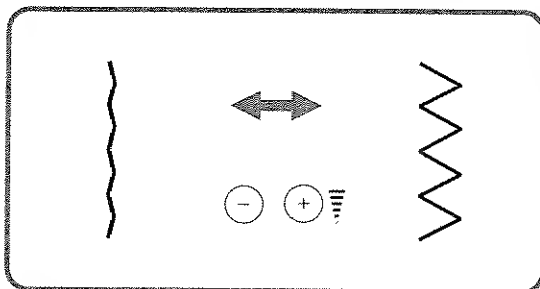


✦ Stitch width adjustment button

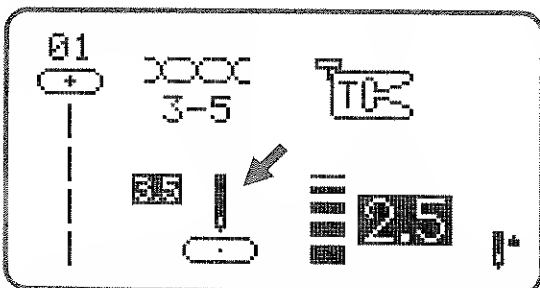


When you select a stitch, the machine will automatically set the recommended stitch width, which will be indicated by numbers on the LCD screen. The stitch width can be regulated by pressing the stitch width adjustment buttons.

Certain stitches have a limited stitch width.



For a narrower stitch, press the "-" button (left). For a wider stitch, press the "+" button (right). The stitch width can be adjusted between "0.0-7.0". Certain stitches have a limited stitch length.

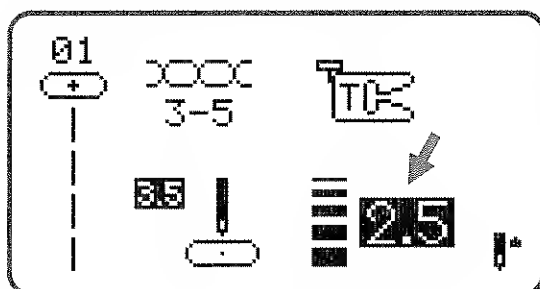


When utility patterns 01~05 are selected, the needle position is regulated by the stitch width adjustment buttons. Pressing the "-" button (left), will move the needle to the left and pressing the "+" button (right), will move the needle to the right. The numbers will be changed from left position "0.0" to extreme right position "7.0". The pre-set center needle position will be indicated as "3.5".

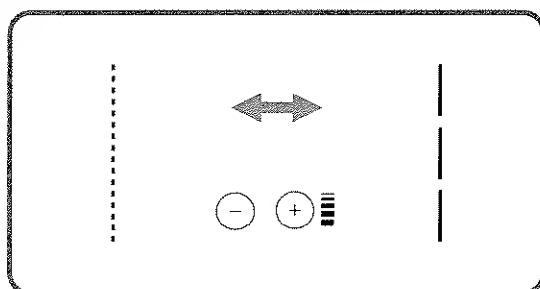
FUNCTION BUTTONS



Stitch length adjustment button

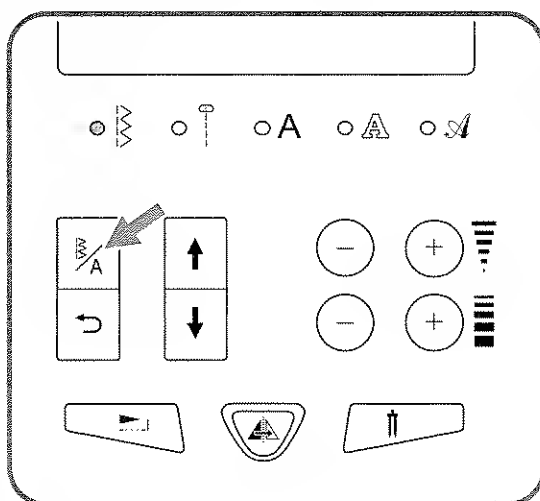


When you select a stitch the machine will automatically set the recommended stitch length which will be indicated by numbers on the LCD screen. The stitch length can be adjusted by pressing the stitch length adjustment buttons.



To shorten the stitch length, press the "-" button (left). For a longer stitch length, press the "+" button (right). The stitch length can be adjusted between "0.0-4.5". Certain stitches have a limited length.

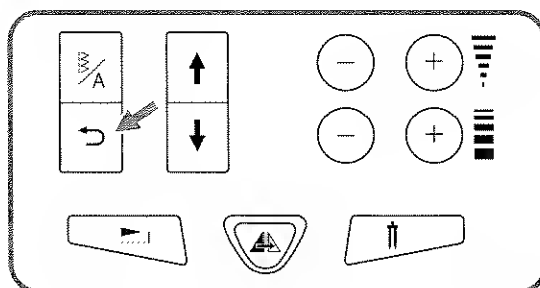
MODE selection button



The LED light will be set at direct mode "W" when start the machine. By pressing the button, LED light will move step by step to select the stitch mode, as shown.

- W Direct mode stitch selection.
- Utility and decorative pattern mode: Stitch selection using number buttons.
- A Block letter mode: Character selection using number buttons.
- A Script letter mode: Character selection using number buttons.
- A Outline letter mode: Character selection using number buttons.

Return button



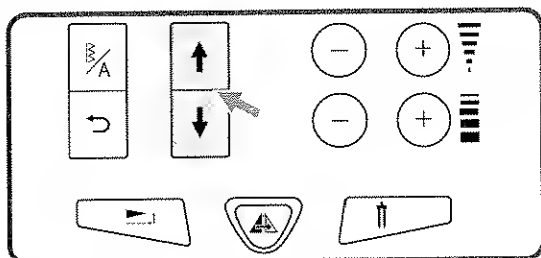
Return to the previous browse display by pressing the "W" Button.

The screen for browse display and memory function display can be exchanged in memory mode.

FUNCTION BUTTONS



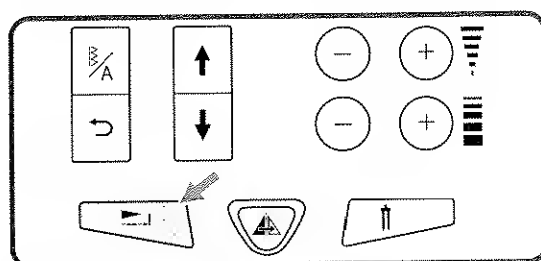
Arrow buttons



In the memory mode use these "↑", "↓" buttons to move in the direction when selecting an item displayed on the screen.

Press "↑" button, for selecting previous page, press "↓" button, for selecting next page in browse display.

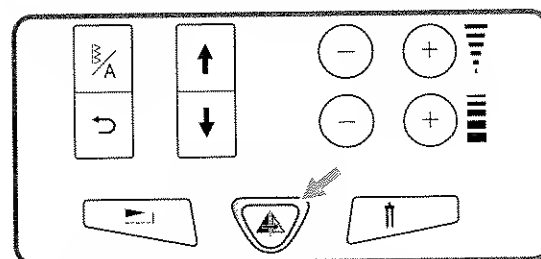
Elongation button (see page 53)



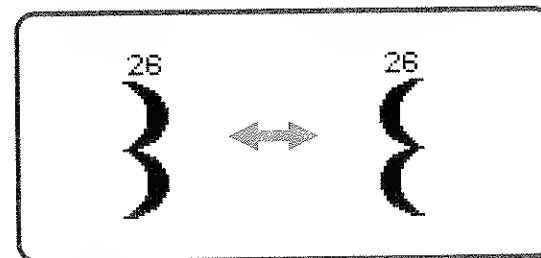
Utility and decorative patterns 24-31 can be elongated up to five times its normal length by pressing the "→" button.

When the width or length or stitch is changed, a greater variety of patterns are available.

Mirror button (see page 54)

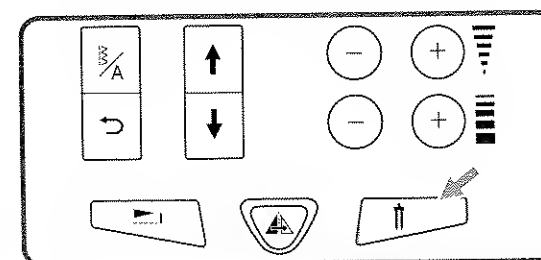


Utility and decorative patterns 01-16, 24-50 can be mirror imaged along a vertical axis by pressing the "↔" button. The machine will continue to sew the reflected pattern until the mirror button is pressed again. The mirror function also will be canceled if the pattern changed.



The function for mirror imaging the pattern appears on the LCD screen.

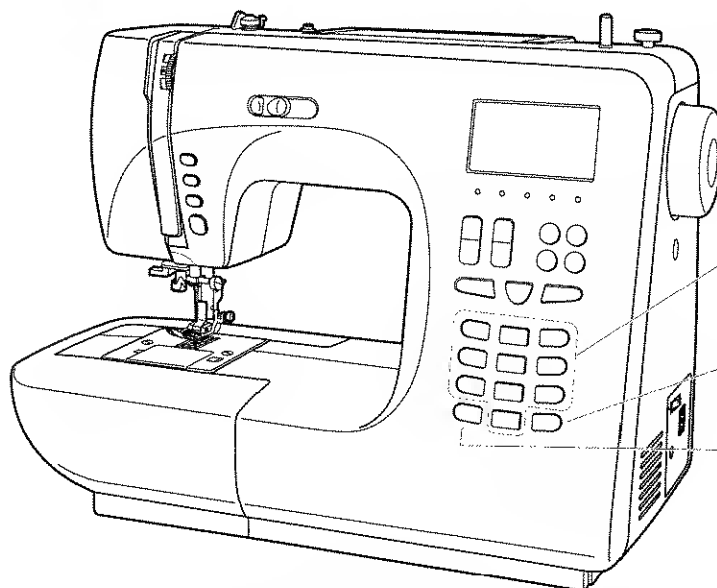
Twin needle button (see page 55)



With the twin needle, utility and decorative patterns 01-16, 24-50 can sew two parallel lines of the same stitch with two different threads.

Press the "||" button, the LCD will display the figure "||" until the machine is stopped. And the machine automatically reduces the maximum width for twin needle sewing. Press the button again for single needle sewing.

SELECTION BUTTONS

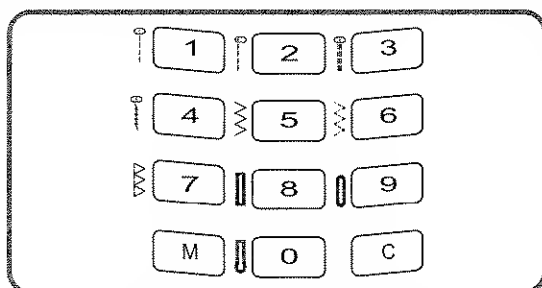


Direct pattern selection
and number buttons

Clear button

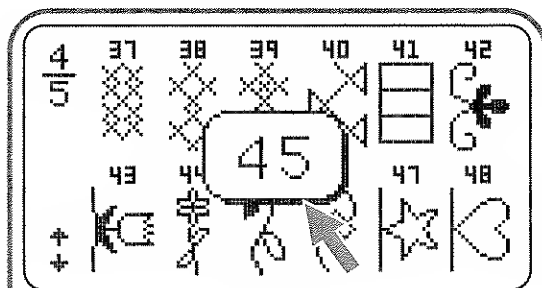
Memory button

Direct pattern selection and number buttons



Direct pattern selection

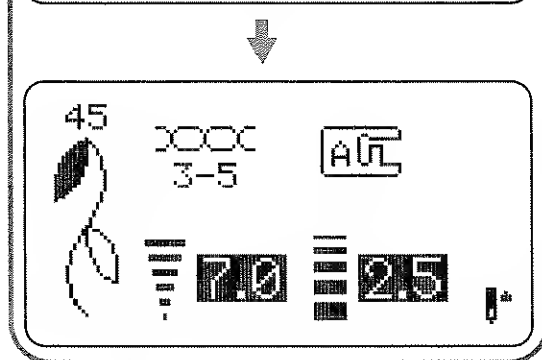
Press the buttons to select the utility patterns shown beside the number button when the mode button is set at the Direct mode.



Number buttons

Press the number buttons for selecting the pattern needed.

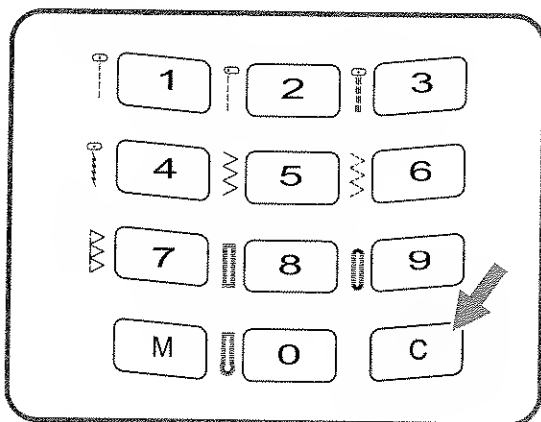
Except the Direct Pattern mode, the other mode can be selected by pressing the desired numbers. For example: pattern 45



SELECTION BUTTONS

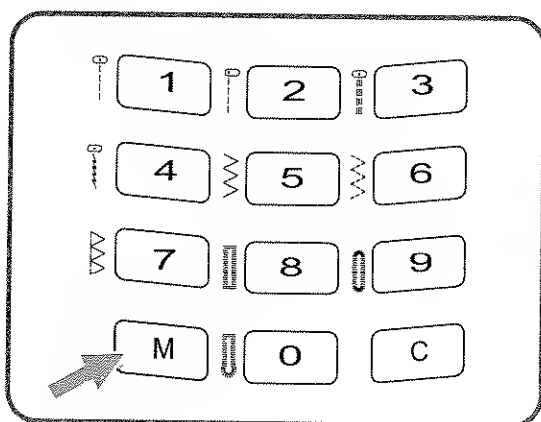


Clear button



Press this button when the incorrect character is selected. Each press of this button erases one character, or press this button to remove an added pattern when sewing combinations of characters or decorative stitches.

Memory button



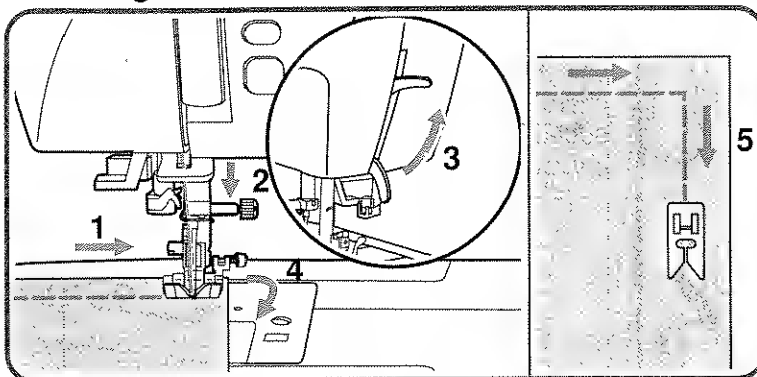
Press the "M" button to enter the memory mode, and store the combinations of characters or decorative stitches. Use the arrow "↑" or "↓" button to confirm the pattern memorized by pressing this button in memory mode.



Please Note: The Direct mode patterns and buttonholes cannot be memorized.

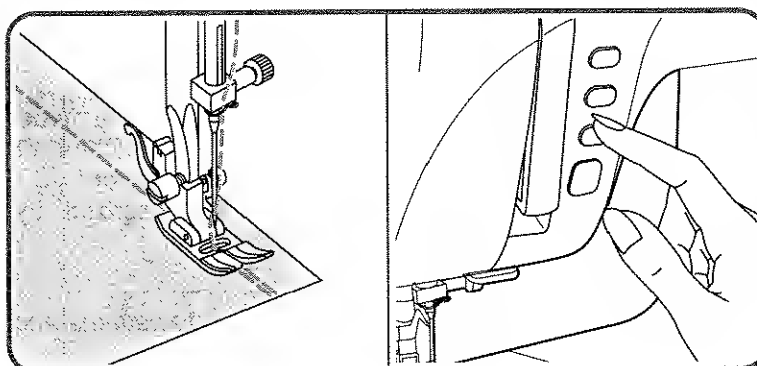
USEFUL SKILLS

Sewing corners



1. Stop the sewing machine when you reach a corner.
2. Lower the needle into the fabric manually or by pressing the needle up/down button once.
3. Raise the presser foot.
4. Use the needle as a pivot and turn the fabric.
5. Lower the presser foot and resume sewing.

Reverse

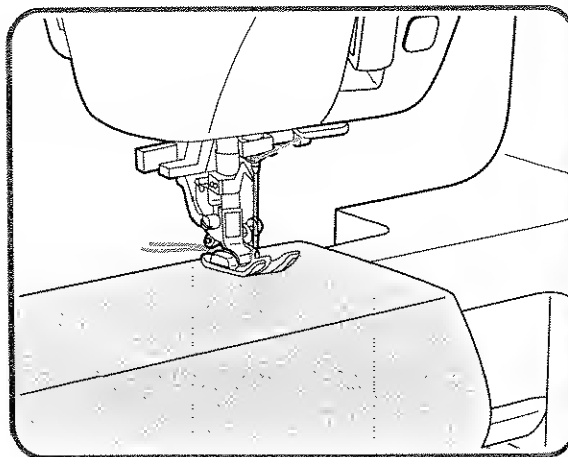
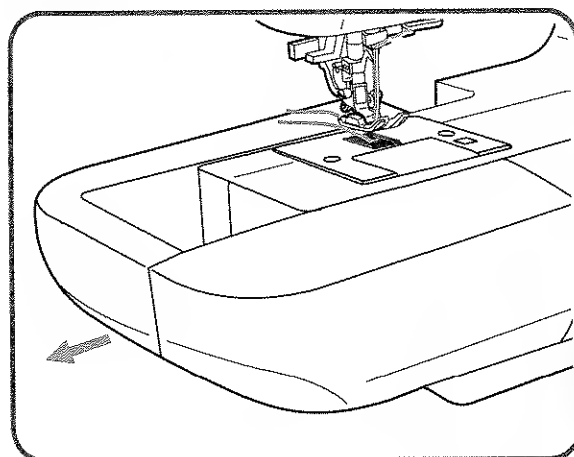


Reverse stitching is used to secure the threads at the beginning and at the end of a seam.

Press the reverse button and sew 4-5 stitches.

The machine will sew forward when the button is released.

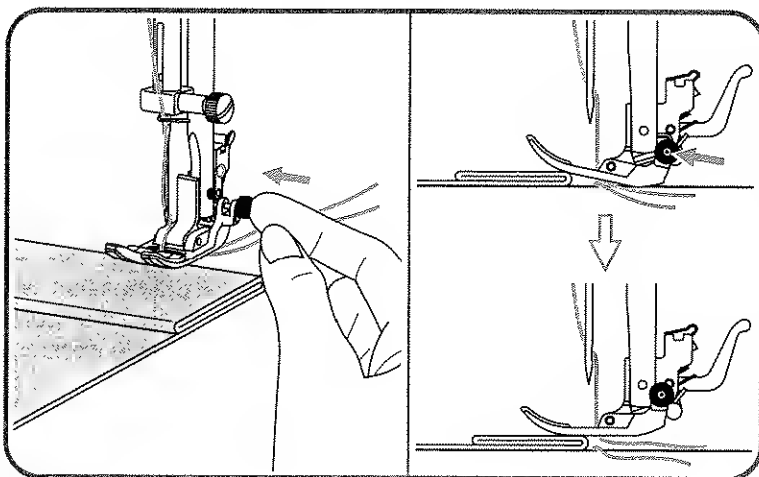
Free arm



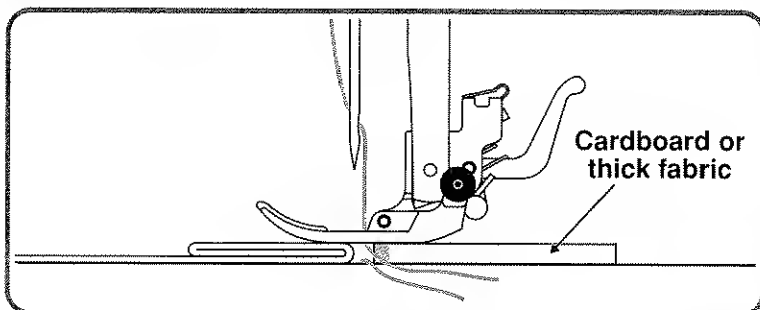
Free-arm sewing is convenient for sewing tubular areas such as pant hems and cuffs.

USEFUL SKILLS

Sewing on the heavy fabric

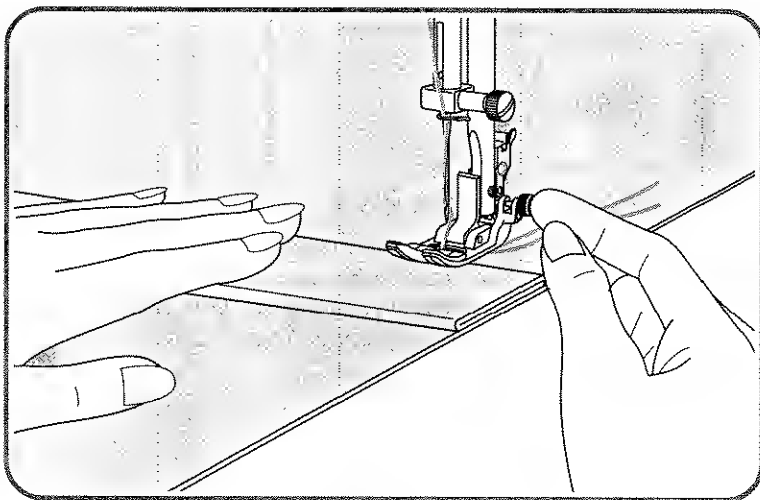


The black button on the right side of the presser foot will lock the presser foot in a horizontal position if you push it in before lowering the presser foot. This ensures even feeding at the beginning of a seam and helps when sewing multiple layers of fabric such as sewing over seams when hemming jeans.



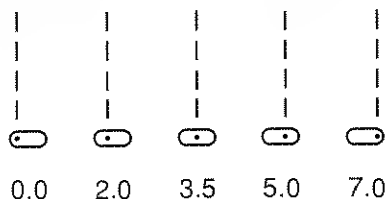
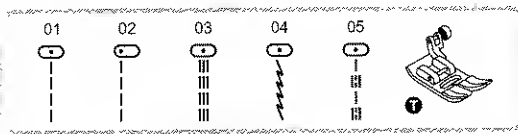
When you reach the point of an increased thickness, lower the needle and raise the presser foot. Press the toe of the foot and push in the black button, then lower the foot and continue sewing.

The black button releases automatically after sewing few stitches.



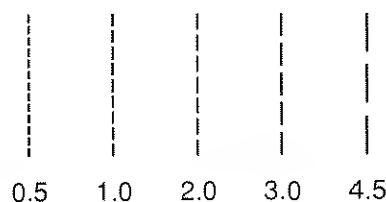
You also can place another piece of fabric with the same thickness at the back of the seam. Or support the presser foot while feeding by hand and sewing toward the folded side.

STRAIGHT STITCHES AND NEEDLE POSITION



Changing the needle position

These settings apply only to utility patterns 01-05. The pre-set position is "3.5", center position. When you press the "-" stitch width adjustment button, the needle position will move to the left. When you press the "+" stitch width adjustment button, the needle position will move to the right. On the LCD screen, the point illustration and the number indicate the needle position.

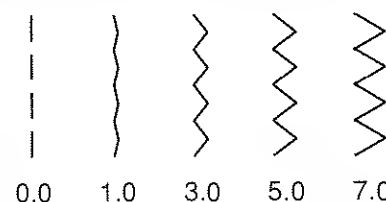


Changing the stitch length

To shorten the stitch length, press the "-" stitch length adjustment button. For a longer stitch length, press the "+" stitch length adjustment button.

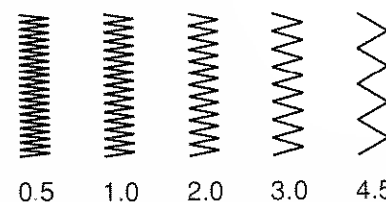
Generally speaking, the thicker the fabric, thread and needle, the longer the stitch should be.

ZIGZAG STITCHES



Adjusting the stitch width

The maximum zigzag stitch width for zigzag stitching is "7.0"; however, the width can be reduced on any patterns. The width increases as you press the "+" stitch width adjustment button from "0.0-7.0".



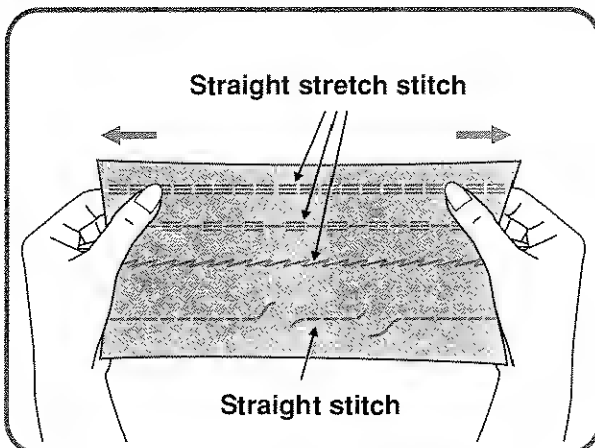
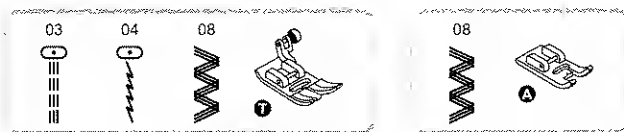
Adjusting the stitch length

The density of zigzag stitches increase as the setting of stitch length approaches "0.2".

Neat zigzag stitches are usually achieved at "1.0-2.5".

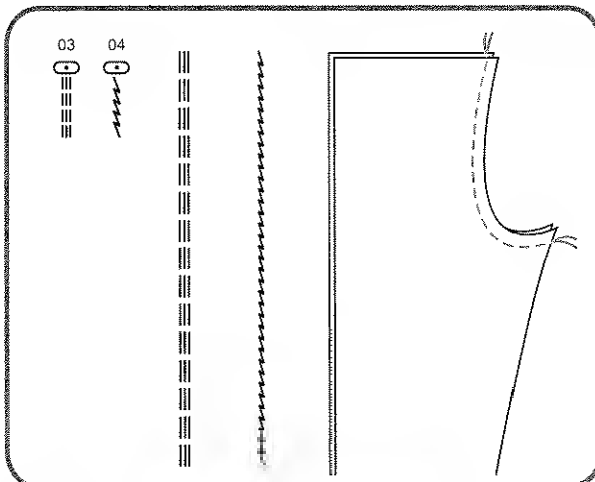
Closed up zigzag stitches (close together) are referred to as a satin stitch.

STRETCH STITCH

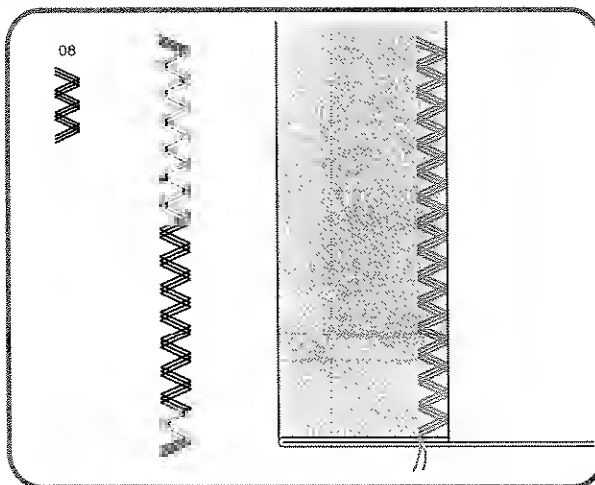


It assures you of a stitch that is strong and flexible and will give with the fabric without breaking. Good for easy to ravel and knit fabrics. It is good for joining durable fabric such as denims.

These stitches can also be used as a decorative top stitch.



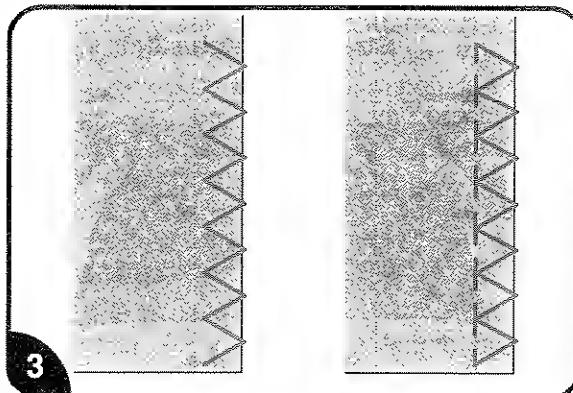
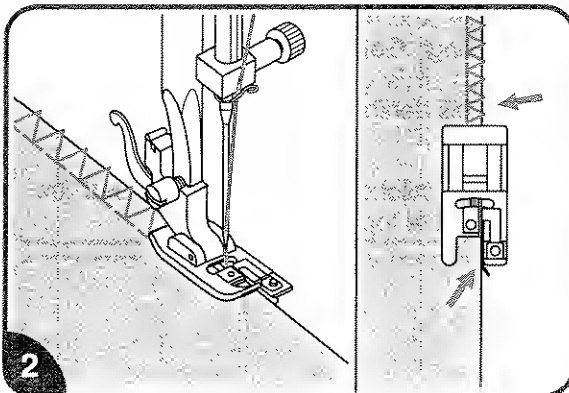
Straight stretch stitch is used to add triple reinforcement to stretch and hardwearing seams.



Triple zigzag stretch stitch is suitable for firm fabrics like denim, poplin, duck, etc.

OVERCASTING STITCHES

Using the overcasting foot

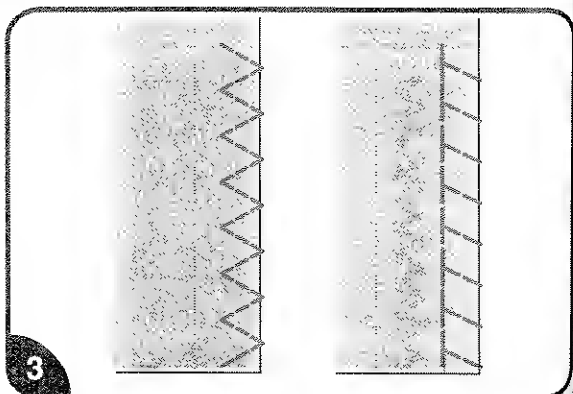
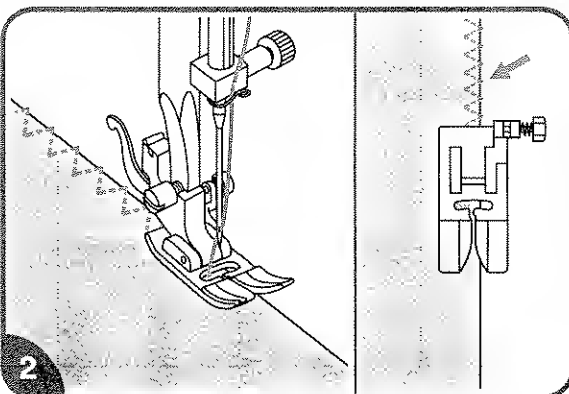


1. Change the presser foot to the overcasting foot.
2. Sew the fabric with the fabric edge against the guide of the overcasting foot.



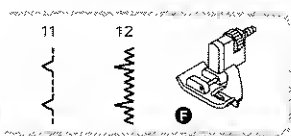
Attention: The overcasting foot should be used to sew with utility patterns 06 and 09 only and do not set the stitch width narrower than "5.0". It is possible that needle could hit the presser foot and break when sewing other patterns and width.

Using the all purpose foot



1. Change the presser foot to the all purpose foot.
2. Sewing the overcasting along the edge of the fabric so that the needle drops over the edge of the fabric on the right side.

BLIND HEM/ LINGERIE STITCH



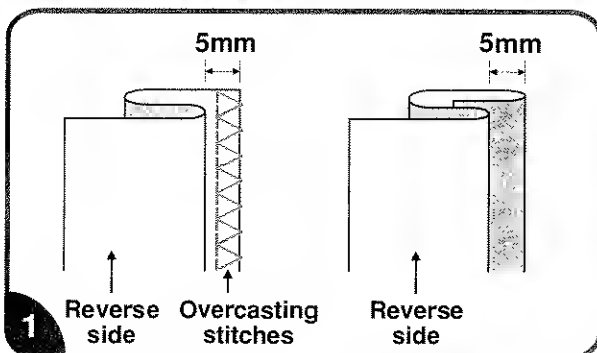
2.5~4.0 1.0~2.0

11: Blind hem/lingerie for firm fabrics

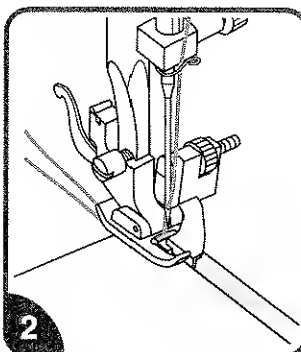
12: Blind hem for stretch fabrics



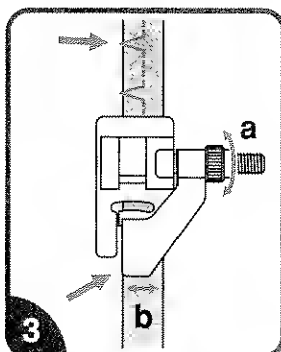
Please Note: It takes practice to sew blind hems. Always make a sewing test first.



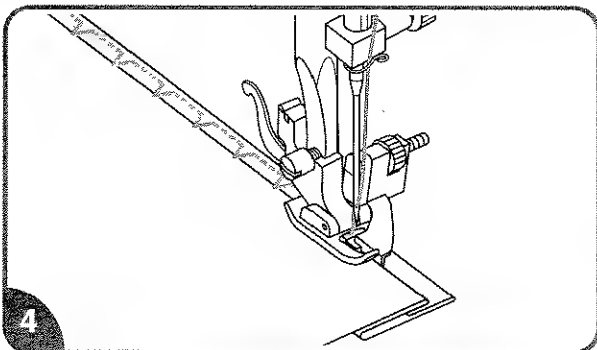
1. Fold the fabric as illustrated with the wrong side uppermost.



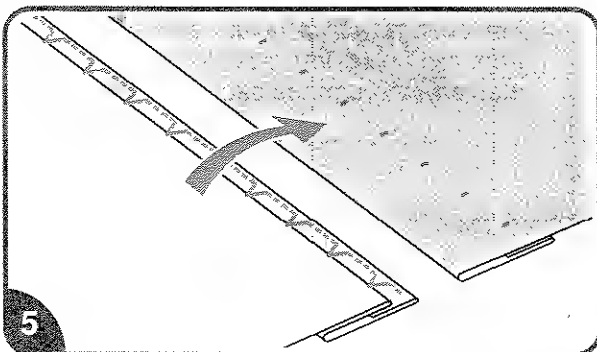
2. Place the fabric under the foot. Turn the handwheel forwards by hand until the needle swings fully to the left. It should just pierce the fold of the fabric. If it does not, adjust the stitch width accordingly.



3. Adjust the guide (b) by turning the knob (a) so that the guide just rests against the fold.

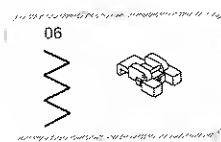


4. Sew slowly, guiding the fabric carefully along the edge of the guide.

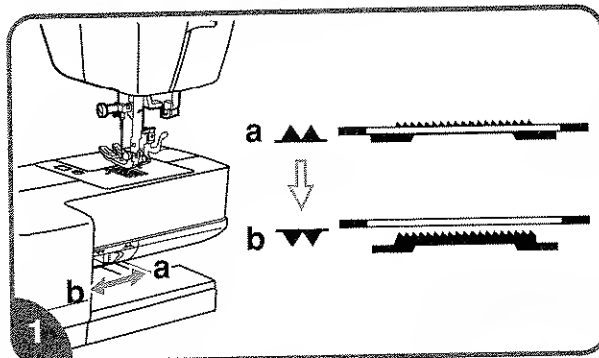


5. Turn over the fabric.

BUTTON SEWING

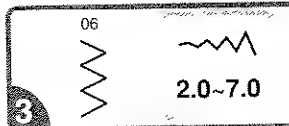
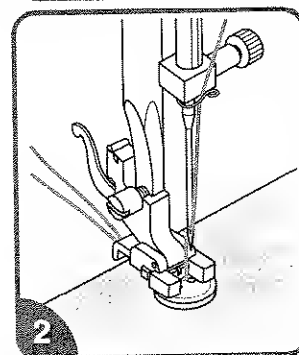


2.0~7.0

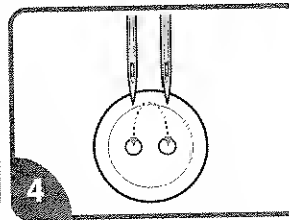


Change the presser foot to the button sewing foot.

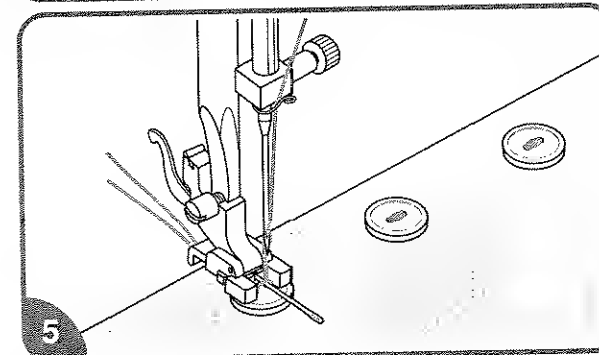
1. Move the drop feed control to "▼" to lower the feed dogs.
2. Position the work under the foot. Place the button in the desired position, lower the foot.



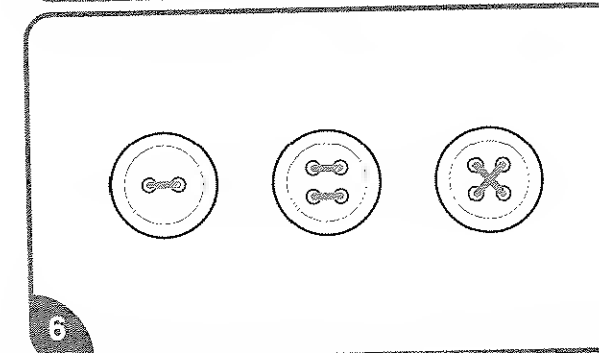
3. Select zig zag pattern. Adjust the stitch width to "2.0-7.0" according to the distance between the two holes of the button.



4. Turn the handwheel to check that the needle goes cleanly into the left and right holes of the button.

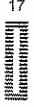
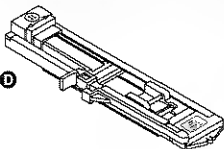

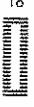





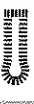






5. Before sewing, press the Auto-lock button to sew reinforcement stitches automatically at the beginning and at the end of the stitch. If a shank is required, place a darning needle on top of the button and sew.

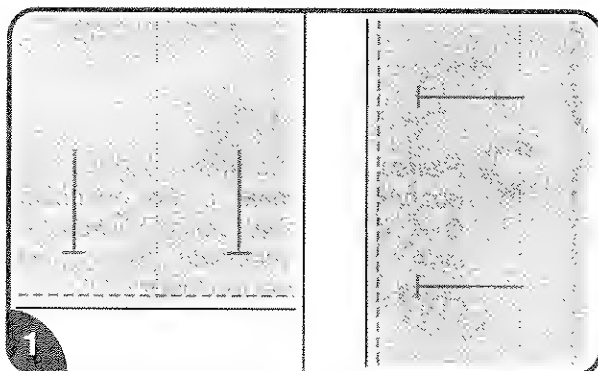


- 6 For buttons with 4 holes, sew through the front two holes first, push work forward and then sew through the back two holes.

BUTTONHOLE STITCHING

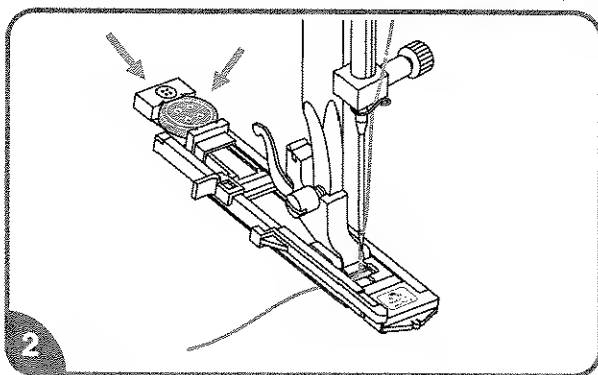
17				-----	17: For thin or medium fabric
			2.5~7.0	0.3~1.0	
18				-----	18: For horizontal holes on blouses or shirts made from thin or medium fabric
			3.0~7.0	0.3~1.0	
19				-----	19: For thin or medium fabric
			2.5~5.5	0.3~1.0	
20				-----	20: For suits or overcoats
21				-----	21: For thick coats
22				-----	22: For jeans or trousers
			5.5~7.0	0.3~1.0	

 **Please Note:** Before sewing a buttonhole on your project, practice on a scrap piece of the same type of fabric.



1. Mark the positions of the buttonhole on the fabric.

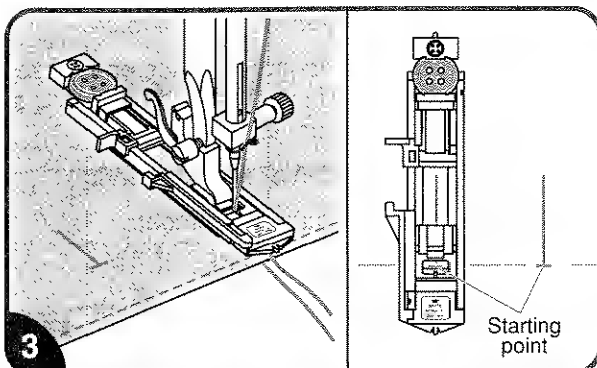
The maximum buttonhole length is 3cm (1 3/16 inch). (Total of diameter + thickness of button.)



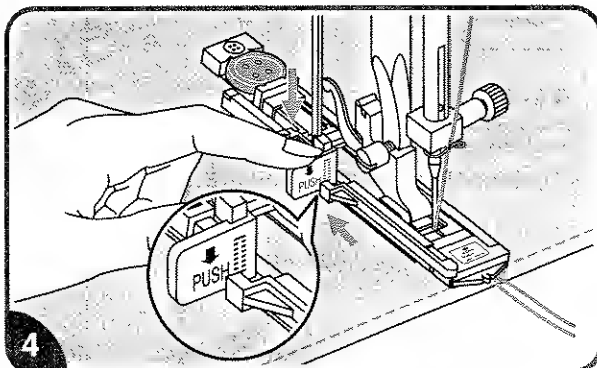
2. Attach the buttonhole foot, then pull out the button holder plate and insert the button. The size of the buttonhole is determined by the button inserted in the button plate.

The thread should be passed through the hole in the presser foot, then be placed under the foot.

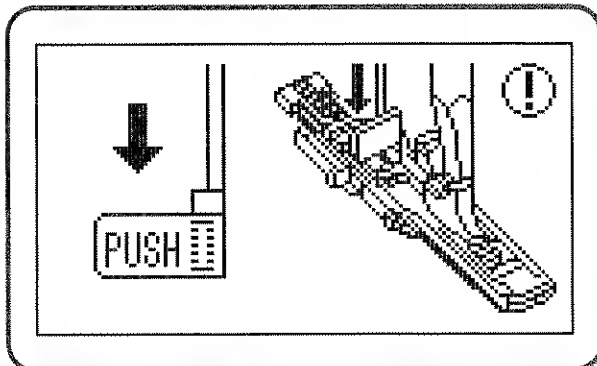
BUTTONHOLE STITCHING



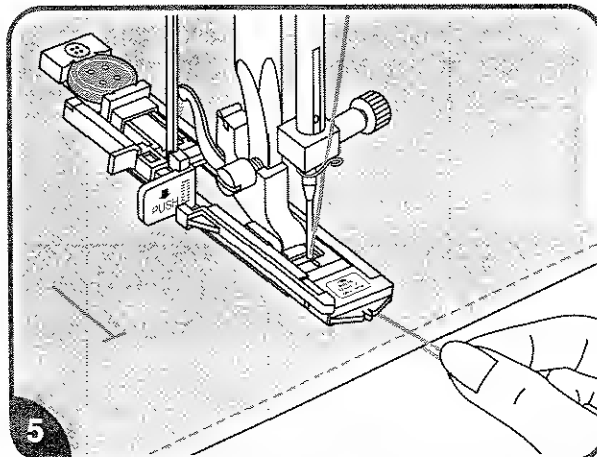
3. Select the buttonhole stitch. Adjust the stitch width and the stitch length to the desired width and density.



4. Position the fabric under the presser foot so that the centerline's mark is aligning with the center of the buttonhole foot.
Lower the buttonhole lever, then push it to the back.



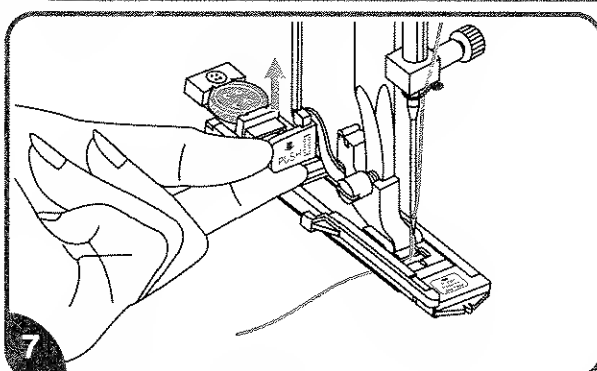
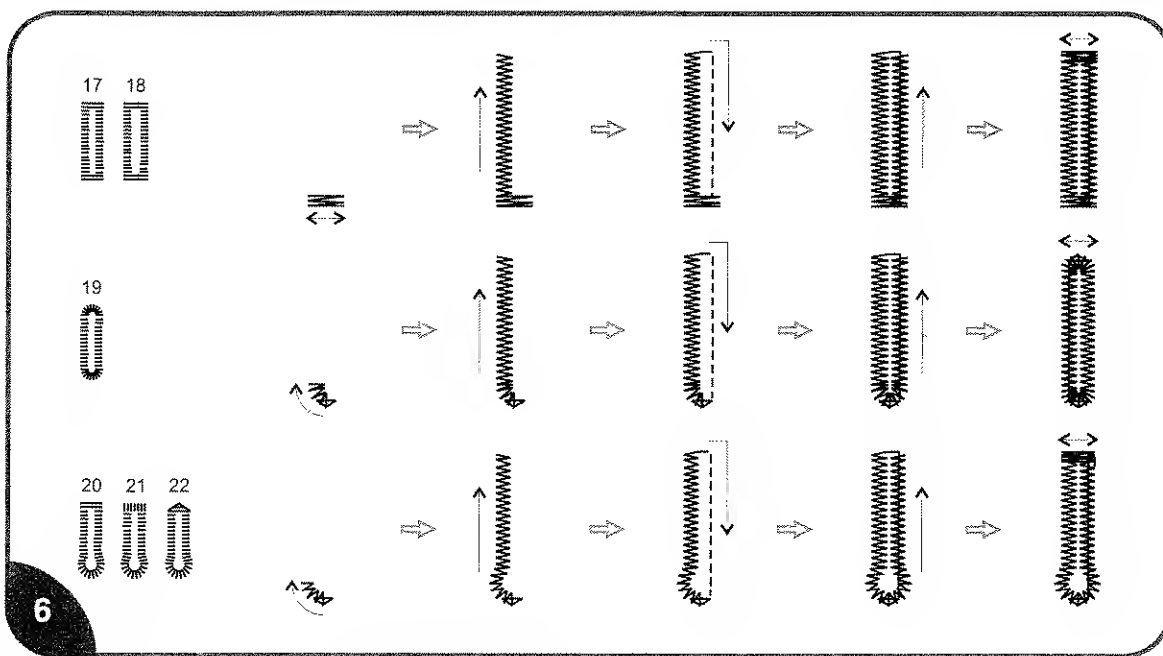
- Please Note:** The warning symbol will appear on screen if the buttonhole lever is on upper position when you select any buttonhole pattern and press the "Start/stop" button.



5. Before sewing, please hold the thread by hand.

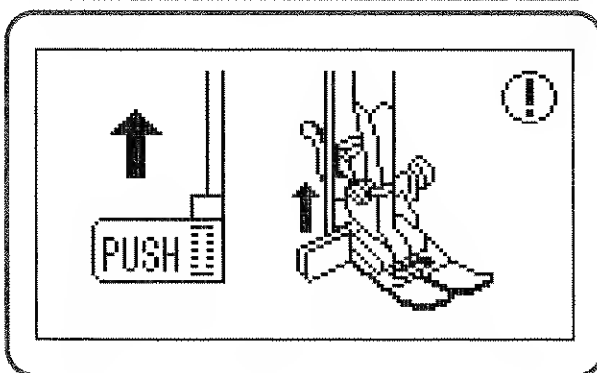
- Please Note:** Gently feed the fabric by hand. Before stopping, the machine will automatically sew a reinforcement stitch after the buttonhole is sewn.

BUTTONHOLE STITCHING



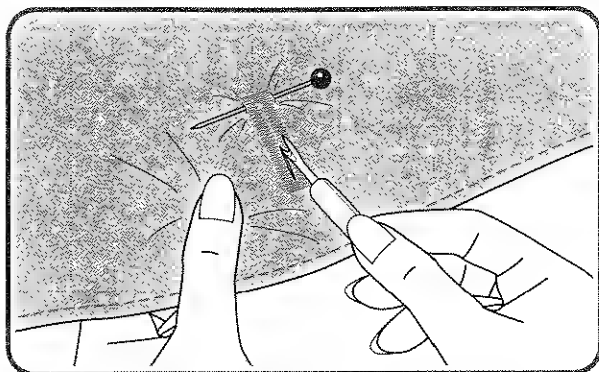
6. Buttonholes are sewn from the front of the presser foot to the back, as shown.

7. Raise the presser foot and cut thread. To sew over same buttonhole, raise the presser foot (will return to original position). After sewing the buttonhole stitch, raise the buttonhole lever until it stops.



Please Note: After finishing the buttonhole stitch, LCD screen will be demonstrated the warning animation message display, it is to remind you to lift the buttonhole lever.

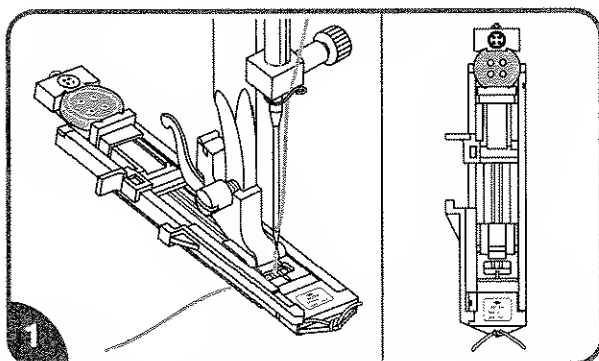
BUTTONHOLE STITCHING



8. Cut the center of the buttonhole being careful not to cut any stitches on either side. Use a pin as a stopper at the bartack so you do not cut too much.

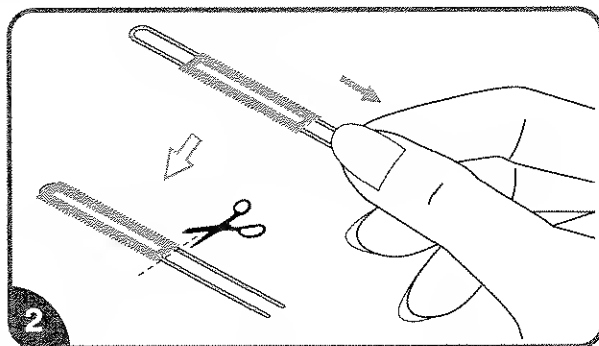
Making a buttonhole on stretch fabrics

When sewing buttonholes on stretch fabric, hook heavy thread or cord under the buttonhole foot.



1. Attach the buttonhole foot and hook the gimp thread onto the back of the presser foot. Bring the two gimp thread ends to the front of the foot and insert them into the grooves, then temporarily tie them there. Lower the presser foot and start sewing.

Set the stitch width to match the diameter of the gimp thread.

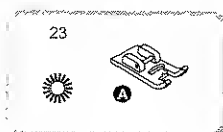


2. Once sewing is completed, pull the gimp thread gently to remove any slack, then trim off any excess.



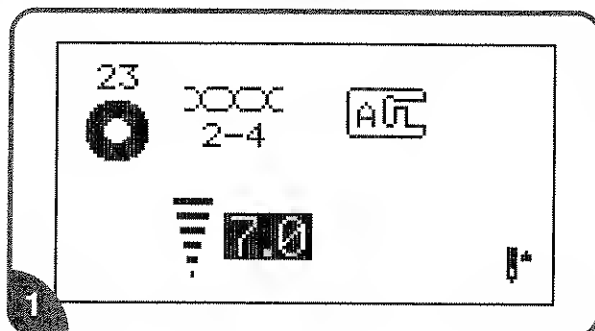
Please Note: It is suggested that you use interfacing on the backside of the fabric.

EYELET STITCH

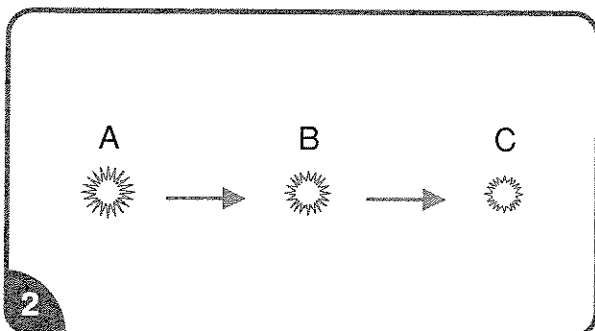


5.0 6.0 7.0

23: Select for sewing eyelets on belts , etc



1. Select pattern 23 to get the eyelet stitch. Attach presser foot "A".



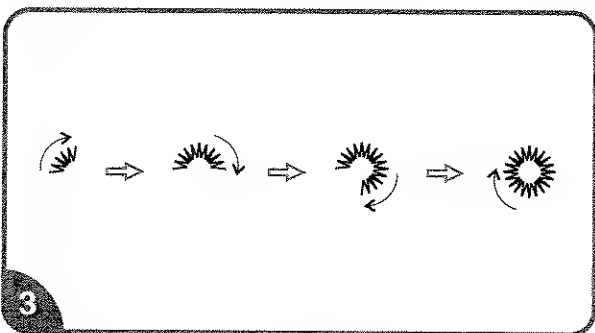
2. Press the "-" or "+" stitch width adjustment to button select the eyelet size.

Size of eyelet.

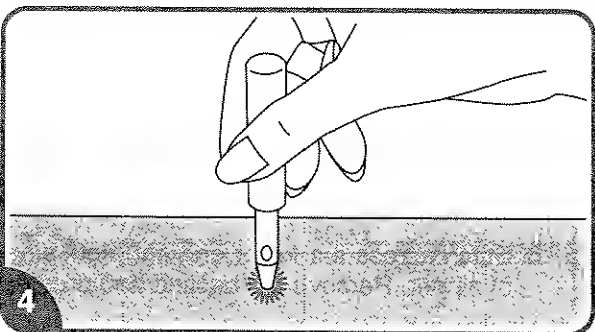
A. Large: 7.0mm (1/4 inch).

B. Medium: 6.0mm (15/64 inch).

C. Small: 5.0mm (3/16 inch).



3. Lower the needle into the fabric at the beginning of the stitching, and then lower the presser foot lever. Once sewing is completed, the machine automatically sews reinforcement stitches, then stops.



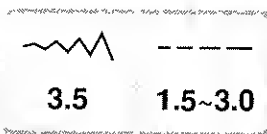
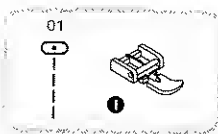
4. Make a hole at the center using an eyelet punch.

* Eyelet punch is not included with the machine.



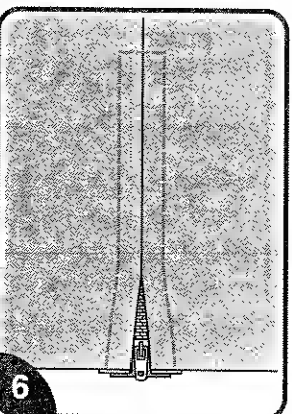
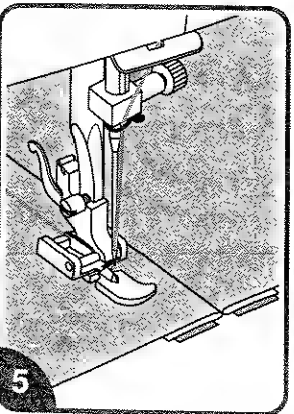
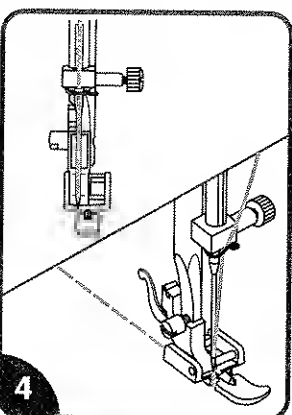
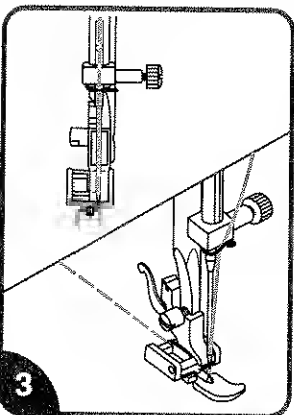
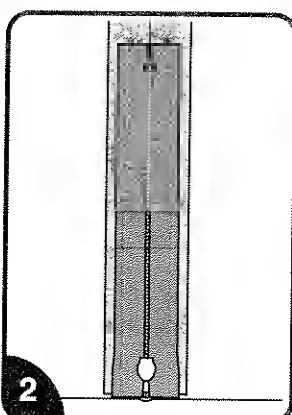
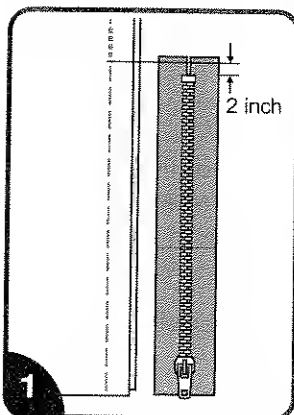
Please Note: If thin thread is used, the stitching may be coarse. If this occurs, sew the eyelet twice one on top of the other.

ZIPPER INSERTION



Attention: Zipper foot must be used for sewing the straight stitch with center needle position (3.5) only. It is possible that needle could hit the presser foot and break when sewing other patterns.

Inserting a centered zipper



1. Baste the zipper opening on the garment.

2. Press open the seam allowance. Place the zipper face down on the seam allowance with the teeth against the seam line. Baste the zipper tape.

3. Attach the zipper foot. Attach the right side of the presser foot pin to the holder when sewing the left side of the zipper.

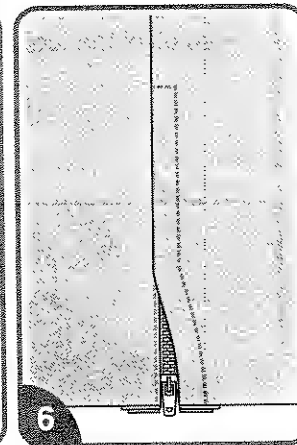
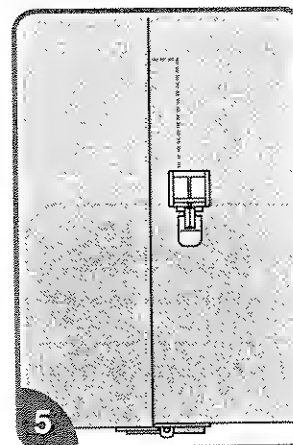
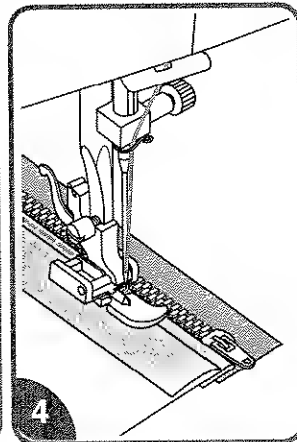
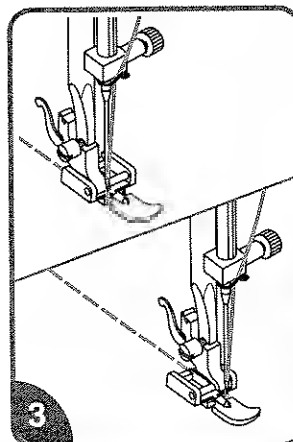
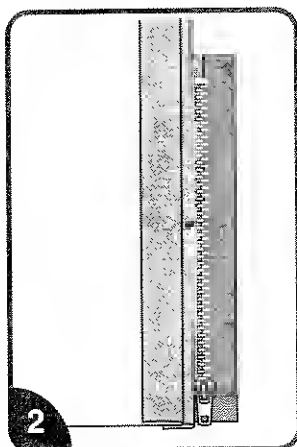
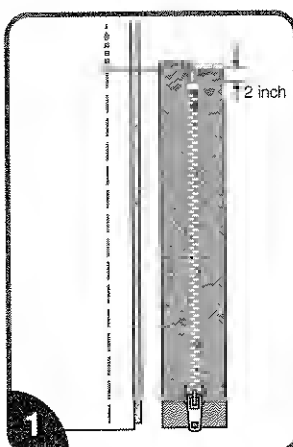
4. Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper.

5. Stitch left side of the zipper from top to bottom.

6. Stitch across the lower end and right side of zipper. Remove the basting and press.

ZIPPER INSERTION

Inserting a side zipper



1. Baste the zipper opening on the garment.

2. Fold back to the left seam allowance. Turn under the right seam allowance to form 3mm (1/8 inch) fold.

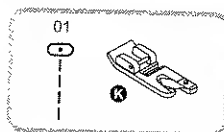
3. Attach the zipper foot. Attach the right side of the presser foot pin to the holder when sewing the left side of the zipper. Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper.

4. Stitch the left side of zipper from bottom to top.

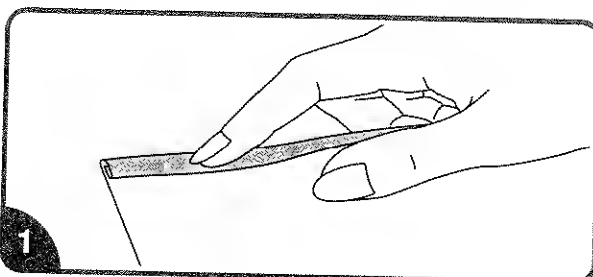
5. Turn the fabric right side out, stitch across the lower end and right side of zipper.

6. Stop about 5cm (2 inches) from the top of zipper. Remove the basting and open the zipper. Stitch the remainder of the seam.

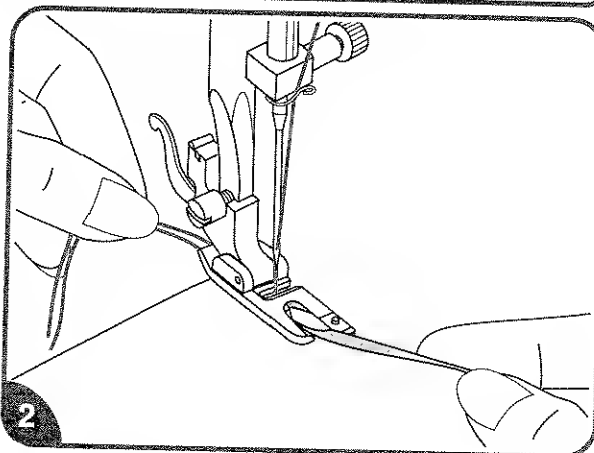
NARROW HEMMING



3.5 1.5~3.0

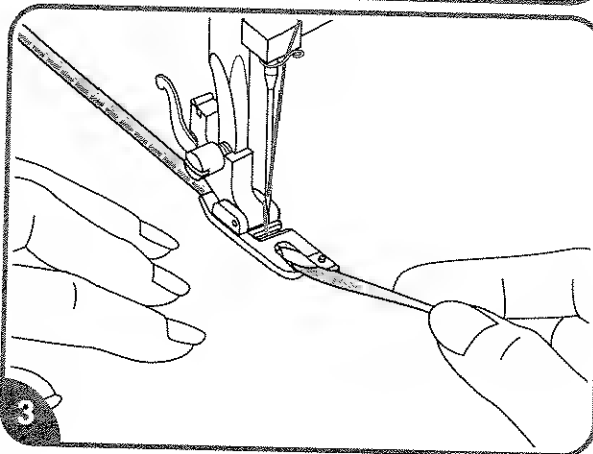


1. Fold edge of fabric over about 3mm (1/8 inch), then fold it over again 3mm (1/8 inch) for about 5cm (2 inches) along the edge of the fabric.



2. Insert the needle into the fold by rotating the handwheel toward you, and lower the presser foot. Sew several stitches and raise the presser foot.

Insert the fabric fold into the spiral opening of hemmer foot. Move fabric back and forth until the fold forms a scroll shape.

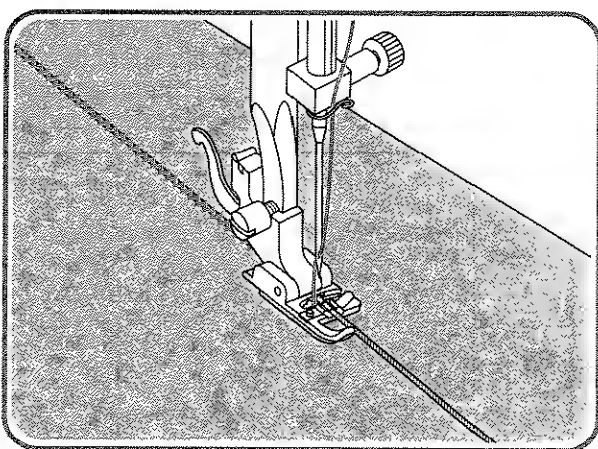
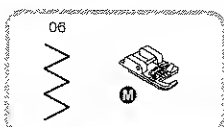


3. Lower the presser foot and start sewing slowly guiding the raw edge of the fabric in front of the hemmer foot evenly into the scroll of the foot.

CORDING

Sew over one strand of cording to create a pretty swirled design on a jacket or vest or sew over three strands of cording for border trims. Pearl cotton, knitting yarn, embroidery floss, lace thread, fine wool or lily yarn can be used for cording.

Single cording

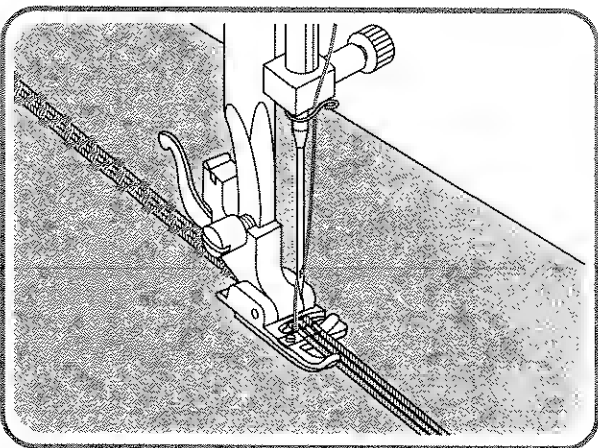
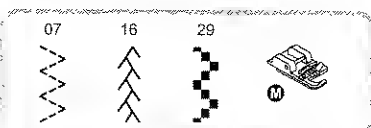


Mark the design on the fabric. Insert the cord in the center groove of the cording foot from the right side opening. Pull the cord about 5cm (2 inches) behind the foot.

The grooves under the foot will hold the length of the cord in place while the stitches are being formed over the cord.

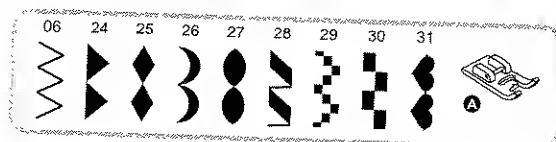
Select the stitch and adjust the stitch width so that the stitches are just covering the cord. Lower the foot and sew slowly, guiding the cord over the design.

Triple cording

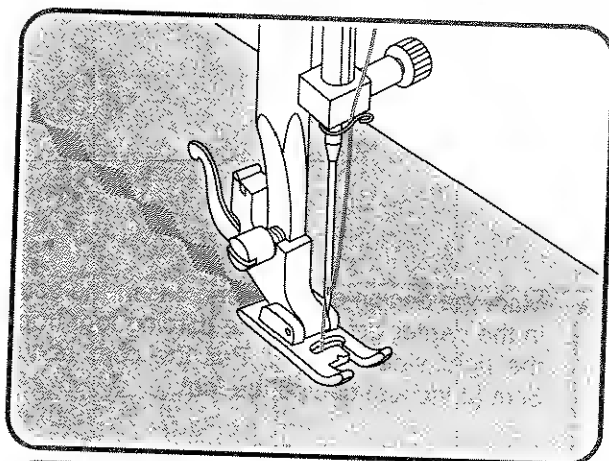


Push the sewing thread to the left and insert three cords into the grooves of the foot and pull about 5cm (2 inches) of the cords behind the foot. Select the desired pattern and adjust the stitch width so that the stitches are just covering the cords. Lower the foot and sew slowly guiding the cords.

SATIN STITCH SEWING

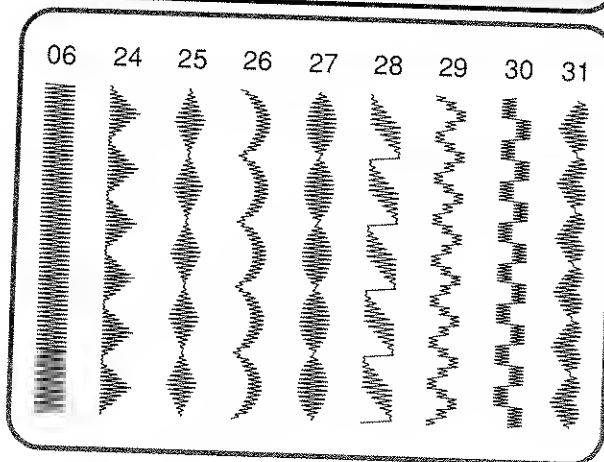


3.5~7.0 0.5~2.0



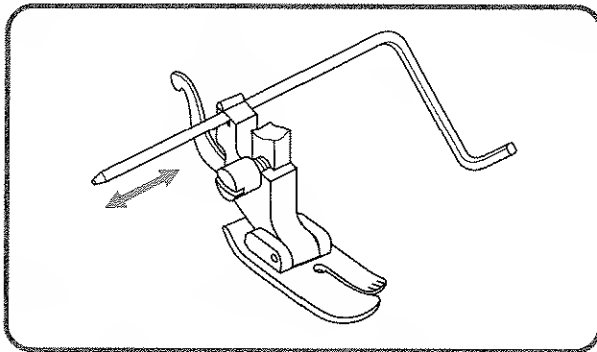
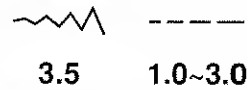
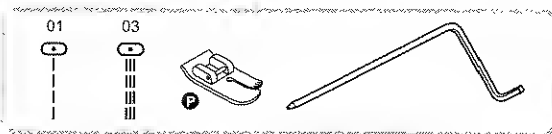
Use the satin stitch foot for satin stitching and sewing decorative stitches. This foot has a full indentation on the underside to allow easy sewing over the thickness of the stitches formed by closely spaced zigzag stitches, and even feeding of the fabric.

To tailor the satin or decorative stitch pattern, you may adjust the length and width of the pattern by pressing the stitch length and width adjustment buttons. Experiment with fabric scraps until you get the desired length and width.

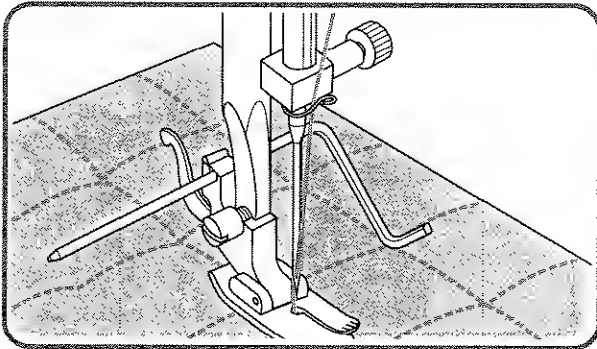


Please Note: When sewing very thin fabrics, it is suggested that you use interfacing on the backside of the fabric.

QUILTING



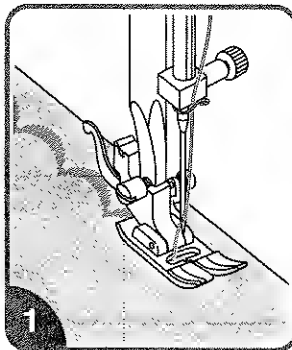
Insert the quilting guide in the presser foot holder as illustrated and set the space as you desire.



Sew the first row and move over the fabric to sew successive rows with the guide riding along the previous row of stitching.

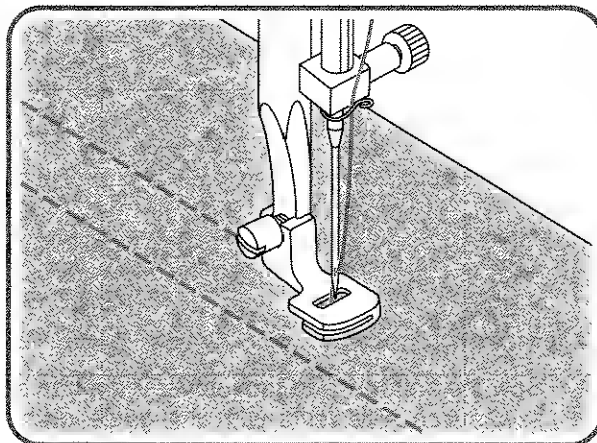
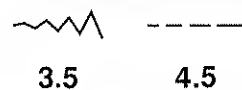
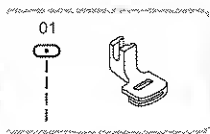
SCALLOP STITCH

Scallop edging



1. Sew on hem line.
2. Trim the fabric close to the stitching taking care not to cut the thread.

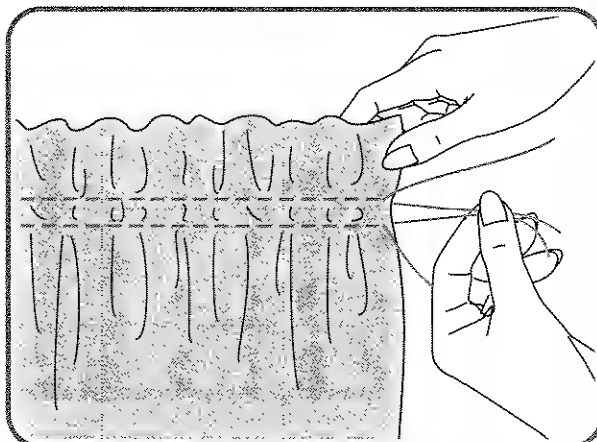
GATHERING



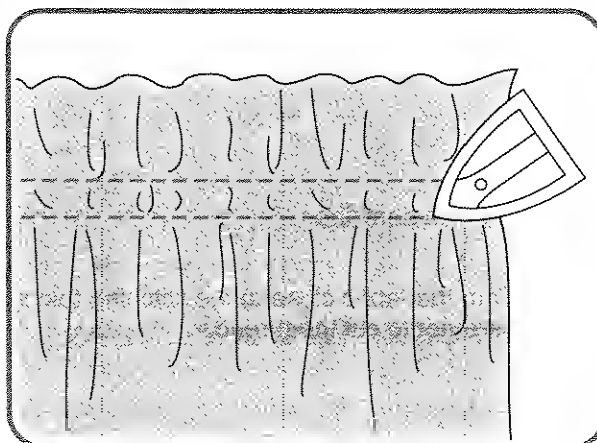
1. Remove the presser foot holder and attach the gathering foot.

2. Sew a single row or multiple rows of straight stitches.

3. If more gathering is required, loosen the upper thread tension to below 2 so that the bobbin thread lies on the underside of the material.



4. Pull the bobbin threads to obtain the desired amount of gather, then tie the threads to secure them.

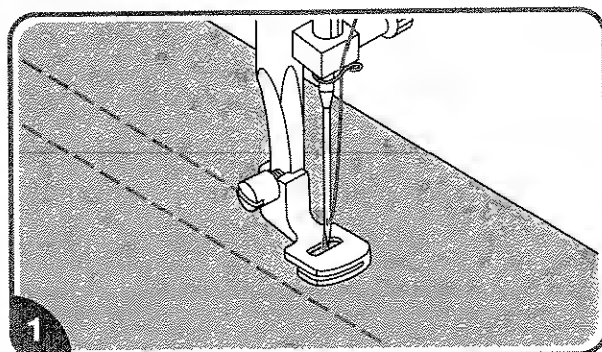
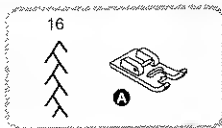
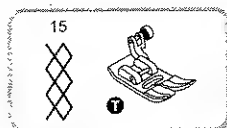


5. Smooth the gathers by ironing them.



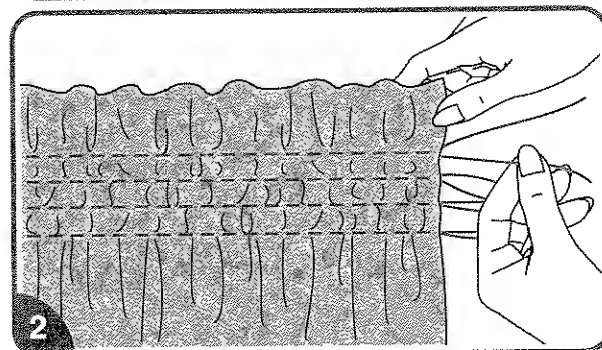
Please Note: It can also use the all purpose foot and gather fabric by hand by lowering the tension setting to below 2 and pulling the lower thread to gather the material.

SMOCKING

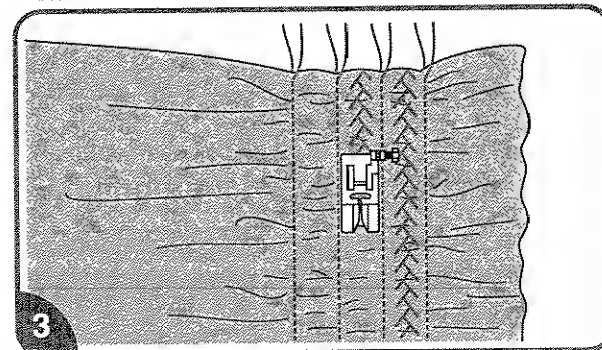


1. Use the gathering foot to sew straight lines 1cm (3/8 inch) apart, across the area to be smocked.

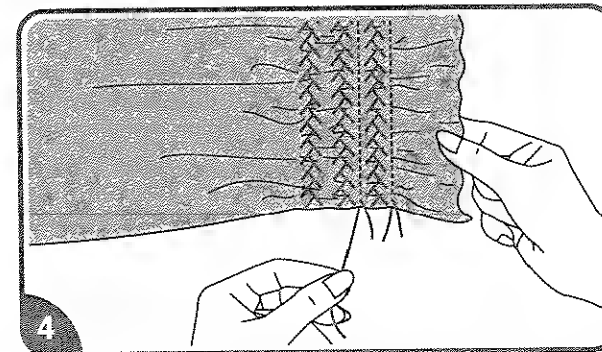
*For gathering sewing instructions, see page 47.



2. Knot the threads along one edge. Pull the bobbin threads and distribute the gathers evenly. Secure the threads at the other end.

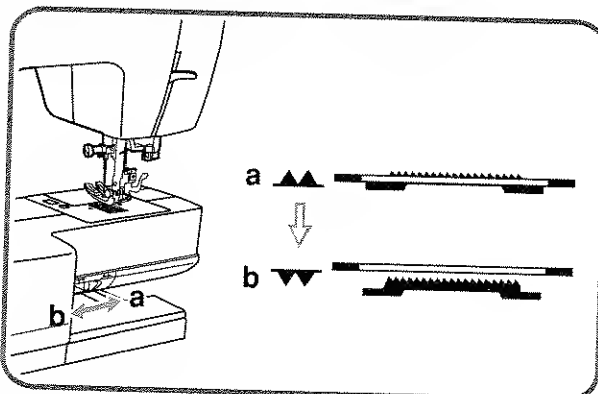
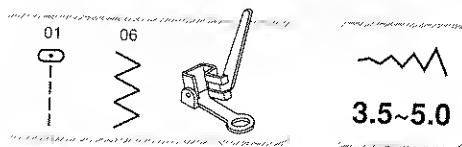


3. Reduce the tension, if necessary and sew decorative pattern stitches between the straight seams.

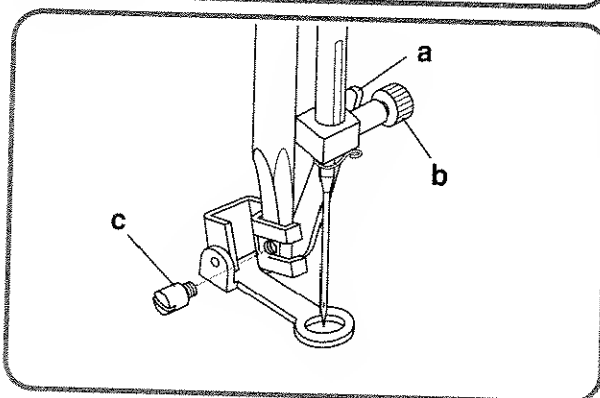


4. Pull out the gathering stitches.

FREE MOTION DARNING, EMBROIDERY AND MONOGRAMMING



Move the drop feed control to "▼" to lower the feed dogs.

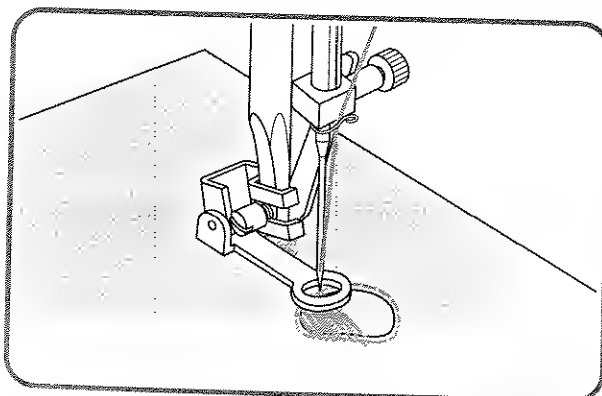


Remove the presser foot holder, and attach the darning foot to the presser foot holder bar. The lever (a) should be behind the needle clamp screw (b). Press the darning foot on firmly from behind with your index finger and tighten the screw (c).

Darning



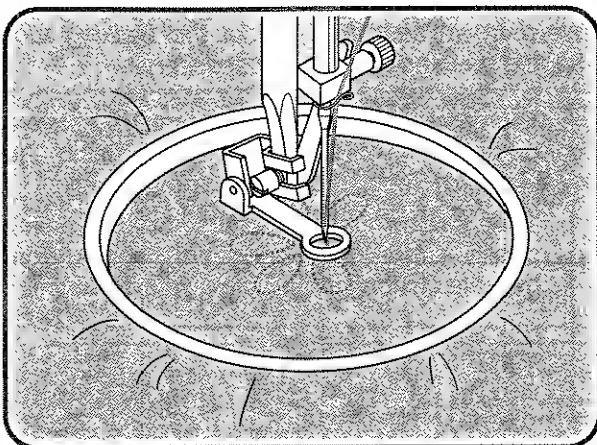
Please Note: Free motion darning is accomplished without the sewing machine internal feed system. Movement of the fabric is controlled by the operator. It is necessary to coordinate sewing speed and movement of fabric.



First sew around the edges of the hole (to secure the threads). Working from left to right, sew over the hole in a constant and continuous movement. Turn the work by 1/4 and sew over the first stitching moving the work slower over the hole to separate the threads and not form big gaps between the threads.

FREE MOTION DARNING, EMBROIDERY AND MONOGRAMMING

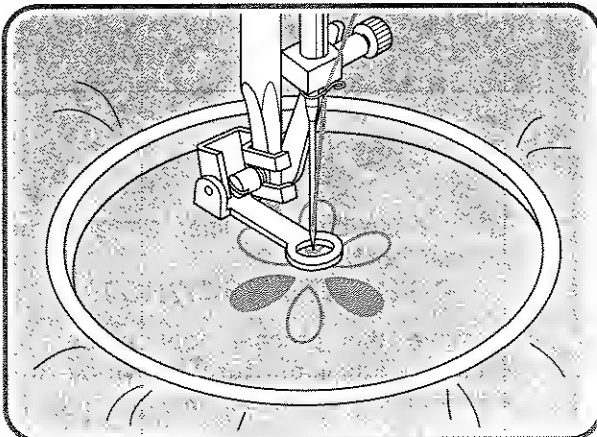
✦ Embroidery



Select zigzag stitch pattern and adjust the stitch width as desired. Stitch along the outline of the design by moving the embroidery hoop. Make sure to maintain a constant speed.

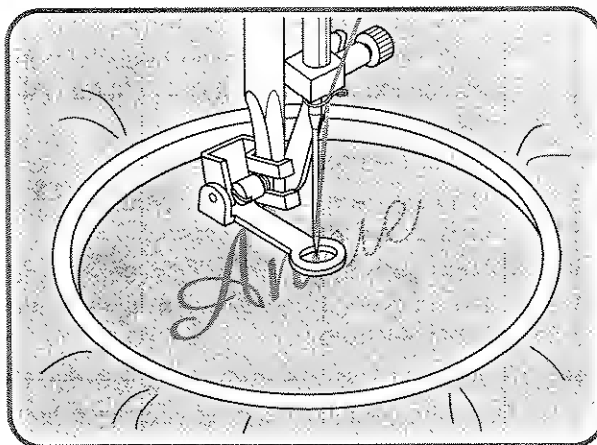
Fill in the design working from the outline towards the inside. Keep the stitches close together.

You will get longer stitches by moving the hoop faster and shorter stitches by moving the hoop more slowly.



Secure with a reinforcement stitches at the end by press Auto-lock button.

✦ Monogramming

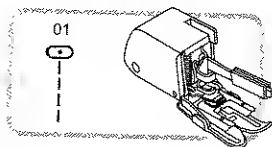


Select the zigzag stitch pattern and adjust the stitch width as desired. Sew at a constant speed, moving the hoop slowly along the lettering.

When the letter is finished. Secure with a reinforcement stitches at the end by press Auto-lock button.

* Embroider hoop is not included with the machine.

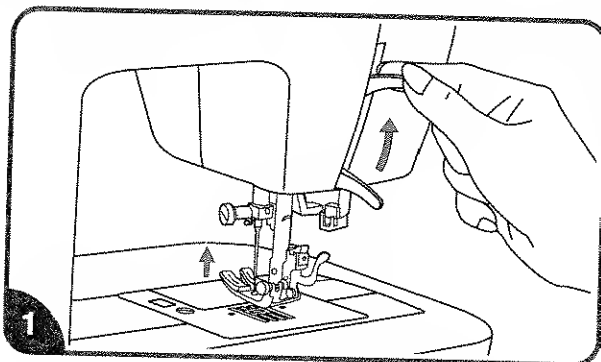
WALKING FOOT (Optional)



* The walking foot accessory is optional. It is not included with this machine.

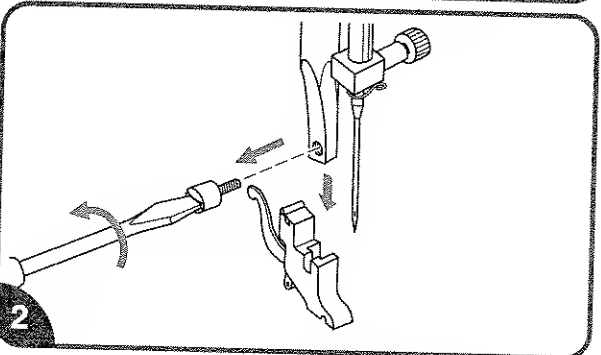


Please Note: Always try to sew first without the walking foot accessory which should be used only when necessary.



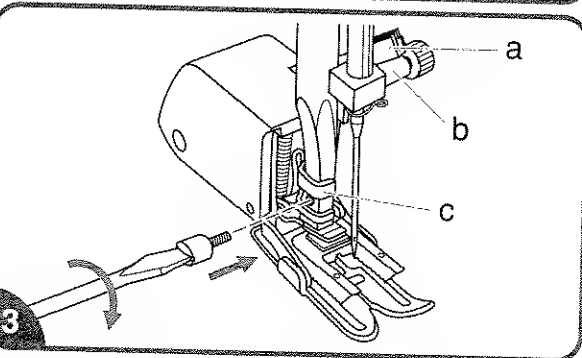
It is easier to guide the fabric and you have a better view of the seam when using the standard, regular foot on your machine.

Your sewing machine offers excellent stitch quality on a wide range of fabrics from delicate chifcons to multiple layers of denim.



The Walking Foot accessory equalizes the feeding of the upper and lower layers of fabric and improves the matching of plaids, stripes and patterns. It also helps to prevent uneven feeding of very difficult fabrics.

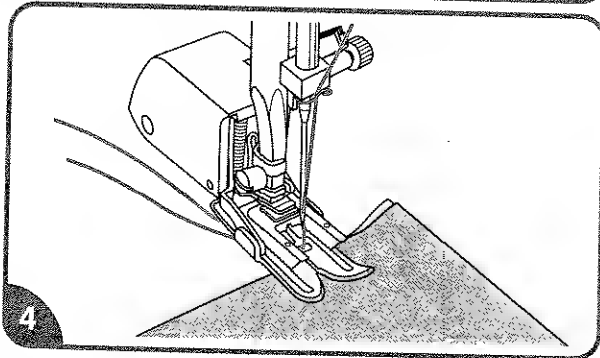
1. Lift the presser foot lifter to raise the presser foot bar.



2. Remove the presser foot holder by unscrewing (counterclockwise) the presser bar attaching screw.

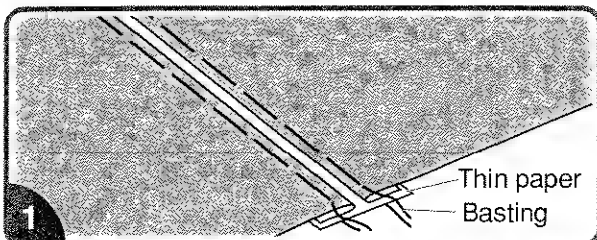
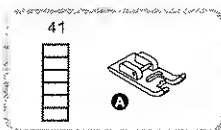
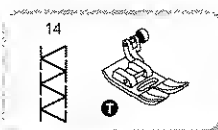
3. Attach the Walking Foot to the machine as follows:

- The arm (a) should fit into above the needle screw and clamp (b).
- Slide the plastic attaching head (c) from your left to right so that it is fitted into the presser foot bar.
- Lower the presser foot bar.
- Replace and tighten (clockwise) the presser bar attaching screw.
- Make sure both the needle screw and the presser bar attaching screw are tightly secured.

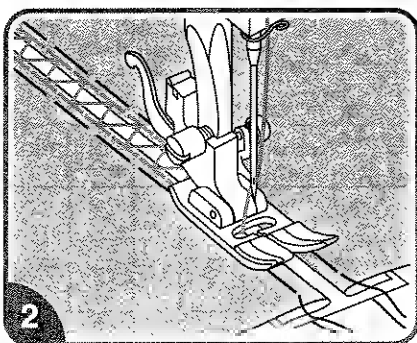


4. Draw the bobbin thread up and place both the bobbin thread and the needle thread behind the walking foot attachment.

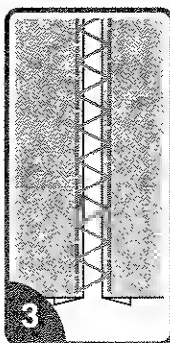
FAGOTING



1. Separate the folded edges of the fabric pieces with a gap of 4mm (1/8 inch) and baste them onto a piece of thin paper or water-soluble stabilizer sheet.

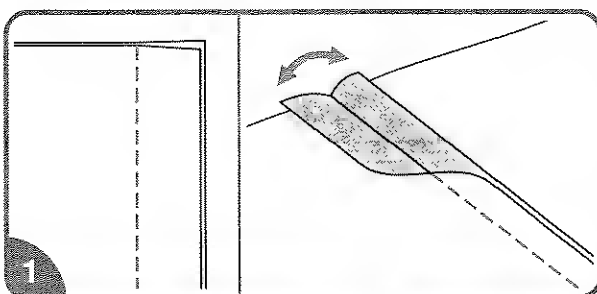
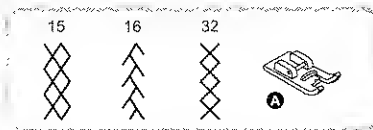
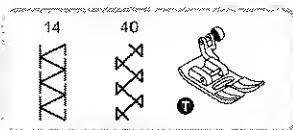


2. Align the center of the presser foot with the center of the two pieces of fabric and begin sewing.

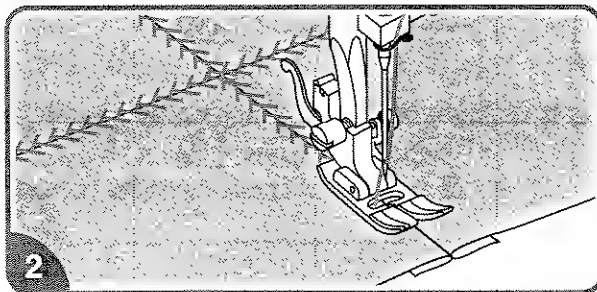


3. After sewing, remove the paper.

PATCHWORK STITCHING

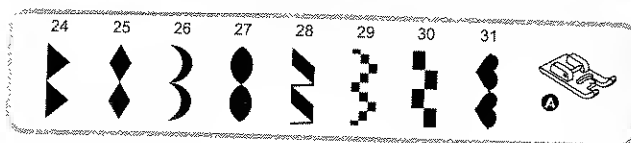


1. Place the two pieces of fabric with the right side together and sew with the straight stitch. Open the seam allowances and presses it flat.

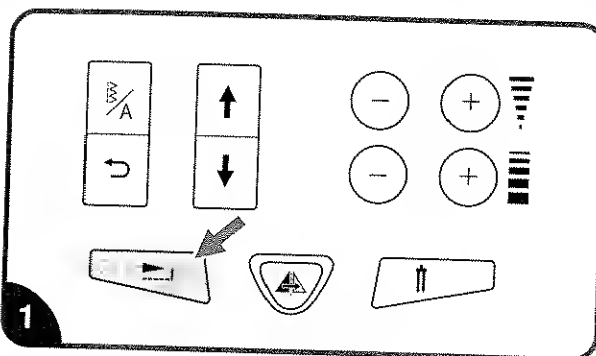


2. Place the center of the presser foot on the seam line of the joined pieces of fabric and sew over the seam.

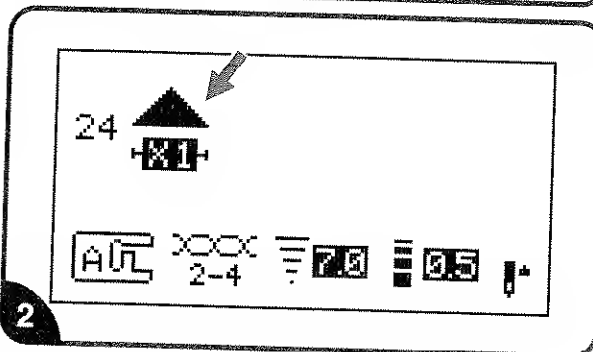
ELONGATION



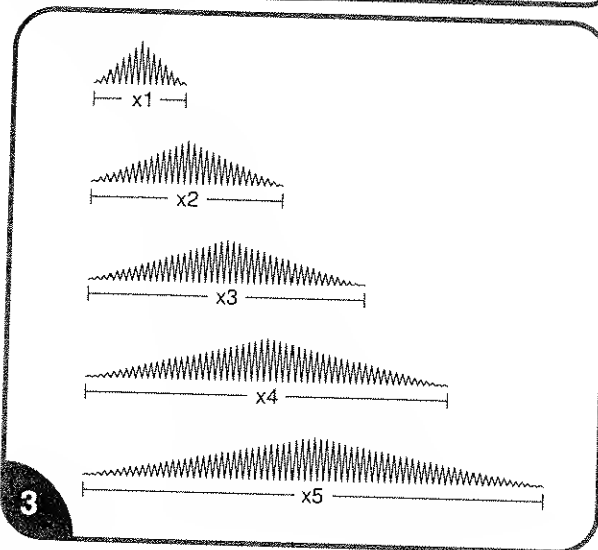
2.5~7.0 0.3~1.0



1. The stitch can be elongated up to five times its normal length by pressing the elongation button.



2. The LCD screen icon for elongation imaging of the pattern appears.



3. When the width or length or stitch is changed, a greater variety of patterns are available.



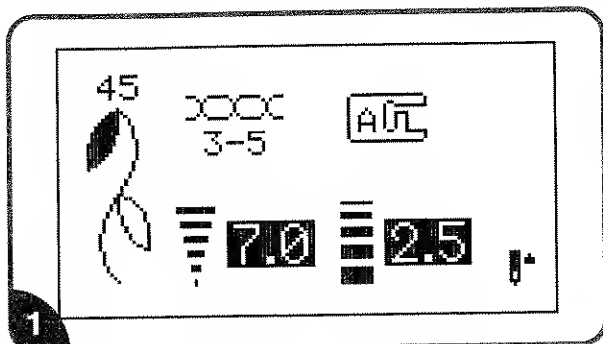
Please Note: Utility and decorative patterns 24-31 can be elongation and mirror simultaneously.

MIRROR

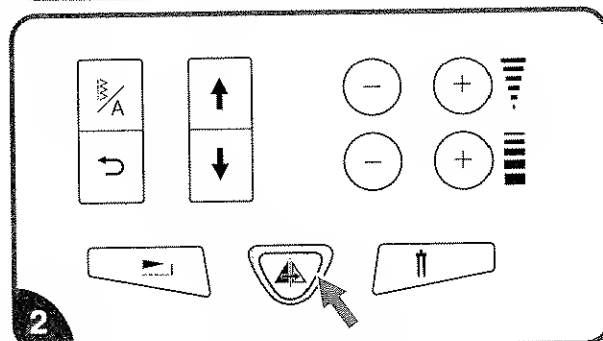


Please Note:

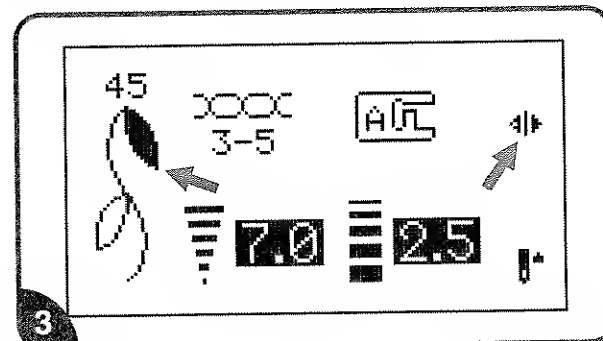
- Utility and decorative patterns 17-23 cannot be mirror imaged.
- Mirror imaged patterns can also be combined with other patterns.



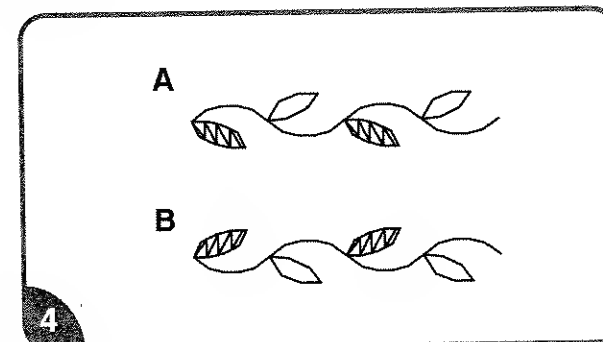
1. Select the pattern.



2. Pressing the mirror button.



3. The LCD screen icon for mirror imaging of the pattern appears.



- A. Normal pattern sewing.
B. Mirror pattern sewing.

USING THE TWIN NEEDLE



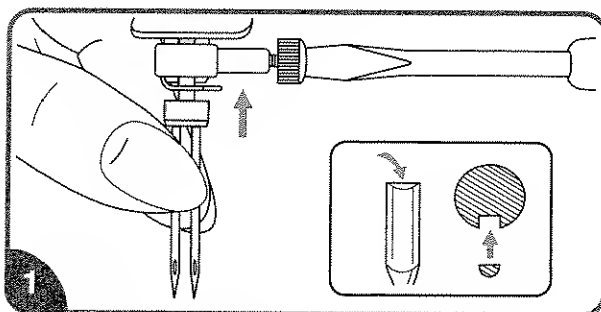
1.0~3.0



Please Note: When using twin needles, use the "T" presser foot regardless of what kind of sewing will be carried out.



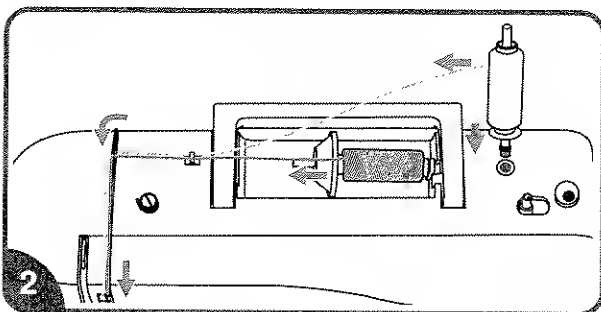
Attention: Only use the twin needle (part code: 006020008). Use of any other needle may bend the needle or damage the machine. Never use bent needles. Bent needles can easily break, possibly resulting in injuries.



1. Insert the twin needle.

2. Follow the instructions for single-needle threading using the horizontal spool pin. Thread through the left needle.

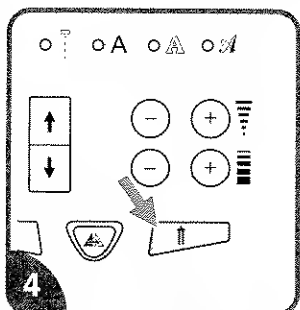
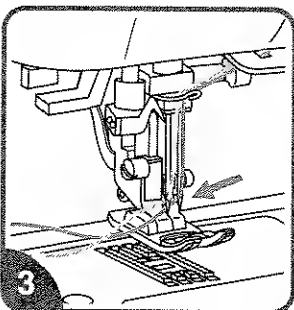
Set the second spool pin (included with the accessories) into the hole on the top of the machine. Thread through remaining points, making certain to omit the thread guide above the needle and pass thread through the right needle.



3. Thread each needle separately.



Please Note: Make sure that the two threads used to thread the twin needle are of the same weight. You can use one or two colors.



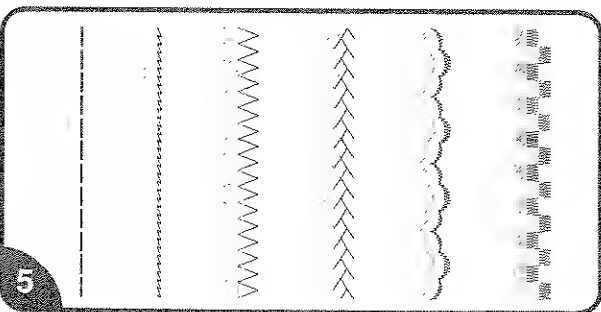
4. Press the Twin needle button, the LCD will display the figure "T" until the machine is stopped, and the machine automatically reduces the maximum width for twin needle sewing.

5. Select a stitch pattern and start to sewing. Utility and decorative patterns 01-16, 24-50 can be used.

Sewing result will be a pattern with two parallel stitch lines.



Please Note: When sewing with twin needle, always proceed slowly, and make sure to maintain a low speed to insure quality stitching.



MEMORY



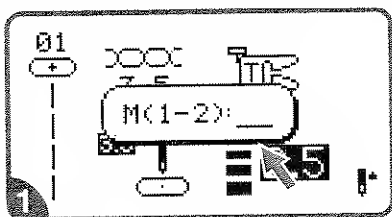
Combined patterns can be stored for later use. Since stored patterns are not lost after the sewing machine is turned off, they can be recalled at any time. This is convenient for patterns, such as names, that will be used often.



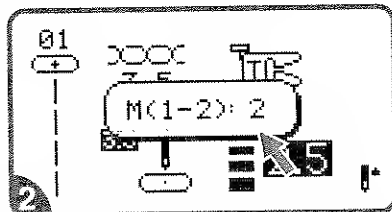
Please Note:

- Multiple patterns selecting from pattern modes "T", A, A, A" can be combined and sewn together.
- This machine has 2 modules of program memory and each module can retain 20 units of stitches.
- The Direct mode patterns and buttonholes cannot enter into memory.
- All the units in the memory can be edited to set its function such as Stitch length, Stitch width, Elongation, Mirror, and Auto-lock.

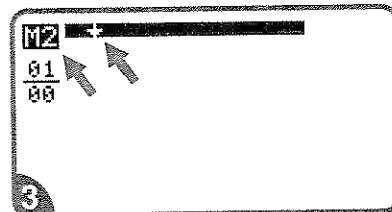
Combining patterns or letters



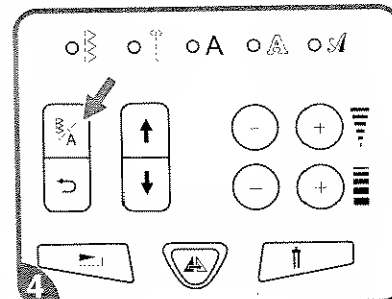
1. Press "M" button to open the memory mode and then appears a sub-screen in the center. It is available to select the number of the memory module when the cursor start flashing.



2. Press number of memory module. (e.g. 2)

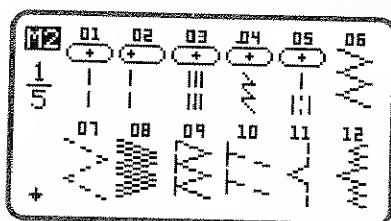


3. Enter the memory screen automatically and the arrow stays in the first position.



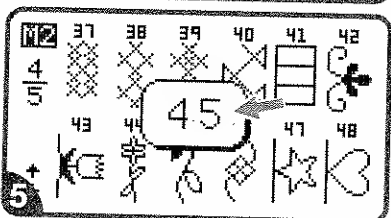
4. Press "K" button to select any desired pattern group among T, A, A, A on front cover.
The LED will indicate the selected group.

MEMORY

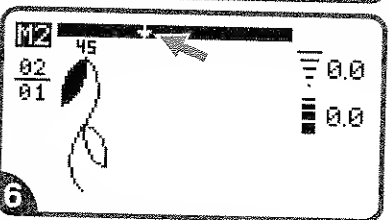


Press one time "M" button, return original mode view, press twice "M" button, next mode view. LED light will move step by step to select the stitch mode, as shown.

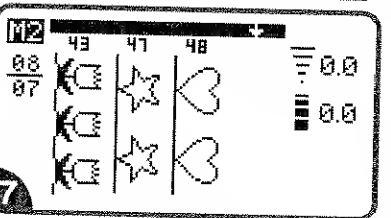
Press "↑", "↓" button, select page on-screen info display. Press "↑" button, select page up. Press "↓" button, select page down.



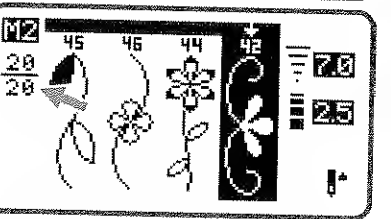
5. Press the desired pattern number. (E.g.45)



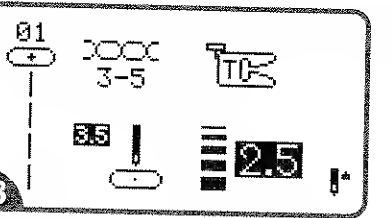
6. The selected pattern displays on the LCD screen and the arrow move to the next position.



7. Repeat step 4, 5, 6 for more patterns to be stored in the memory.



Please Note: When the memory the full with 20 units of patterns, the machine will beep to signal it.



8. Press "M" button to leave the memory mode and return to the normal screen.

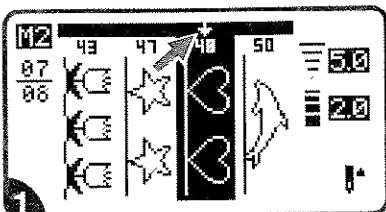


Attention: The selected pattern will be cleared from the memory module after closing the machine if you do not press "M" button again when you have completed your selection.

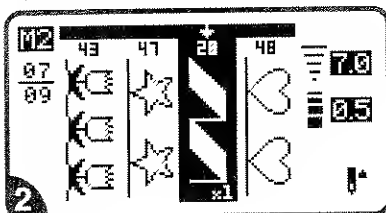
MEMORY



Adding patterns or letters

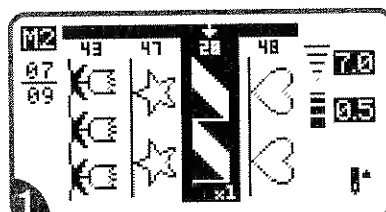


1. Press these arrow "↑", "↓" buttons and shift the arrow past the last pattern or letter where you would like to add another pattern while in the memory mode.

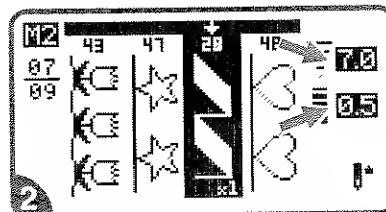


2. Press pattern number. (e.g. 28) The selected pattern will be inserted.

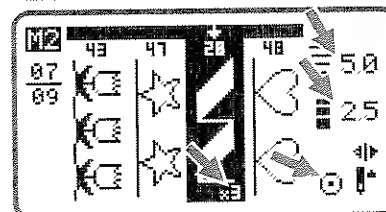
Editing patterns



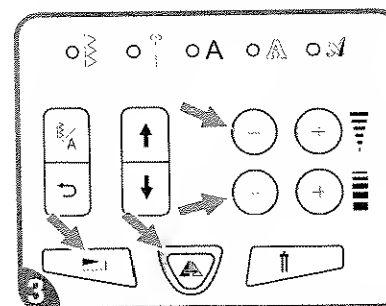
1. Use these arrow "↑", "↓" buttons to select the pattern that you wish to edit while in the memory mode.



2. The stitch length, stitch width, Elongation, Mirror and Auto-lock of the patterns can be adjusted manually.



Please Note: The stitch length, stitch width, Elongation, Mirror and Auto-lock of the patterns can be adjusted manually.



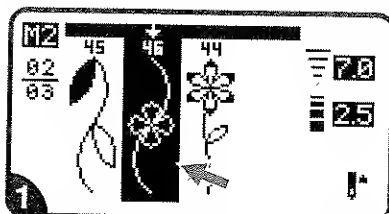
3. Use button to adjust the setting "↑", "↓", "←", "→" and "⊙".

MEMORY

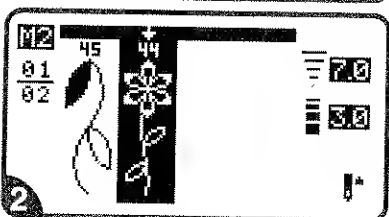


Attention: Any buttons (except "Start/stop" button) will be out of function when the machine is sewing in memory mode. The functions (stitch length, stitch width, mirror, elongation, Auto-lock and so on) will be available only when machine stopping sewing.

✦ Clearing patterns or letters

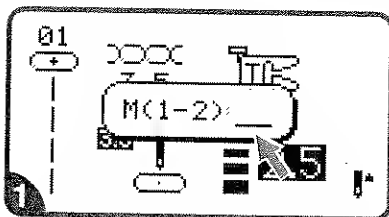


1. Use these arrow "↑", "↓" buttons to select the pattern that you want to clear while in the memory mode.

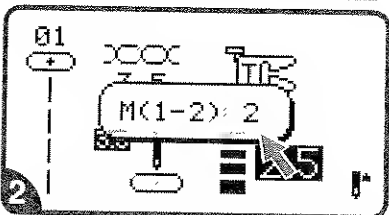


2. Press "C" button to delete the selected pattern and the next pattern in the back will move forward.

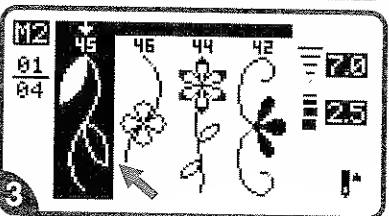
✦ Recalling and sewing the memorized pattern



1. Press "M" button to enter memory mode and then input the number of memory module when the cursor start flashing.

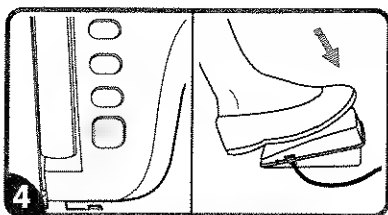


2. Input the number of memory module. (e.g. 2)

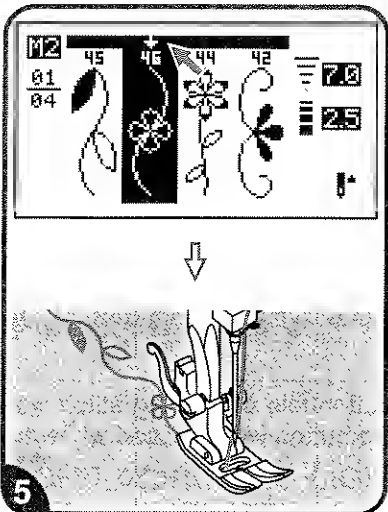


3. The LCD screen containing the various types of stitches will open.

MEMORY



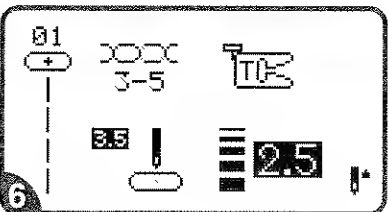
4. Press on the foot control or press the start/stop button to start the sewing machine.



5. The arrow on the LCD screen will move along with the sequential pattern while sewing.



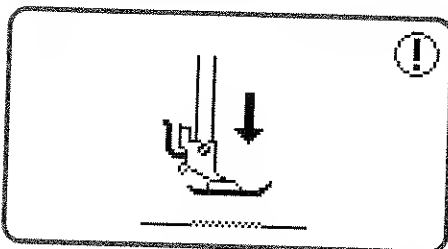
Please Note: If the arrow stays in a vacant position in the end, the machine will start sewing from the first pattern. If the arrow stays under a specific pattern, the machine will start sewing from that pattern.



6. Press "M" button to leave memory mode and return to the normal screen.

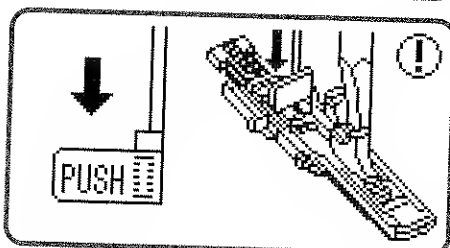
WARNING FUNCTIONS

Warning animation message display



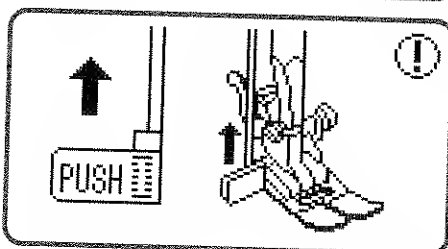
Presser foot is not lowered

The Start/stop button or reverse button was pressed while the presser foot was raised.



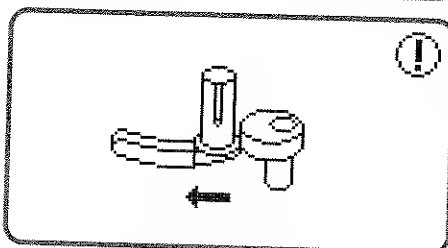
BH lever is not lowered

The buttonhole or darning stitch was selected and the start/stop button was pressed while the buttonhole lever is raised.



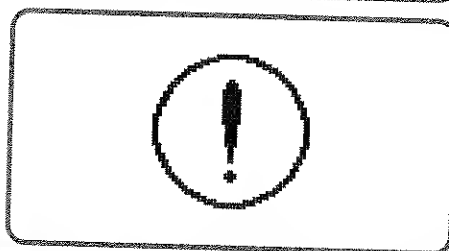
BH lever is not lifted

A stitch other than the buttonhole or darning stitch was selected and the start/stop button was pressed while the buttonhole lever is down.



Return bobbin winder stopper to right

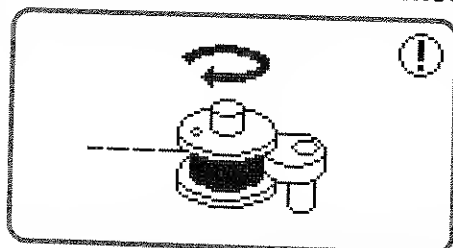
When the bobbin is full or the bobbin winder stopper is in left, press any button (except the Start/stop button), the LCD screen will display the animation of return bobbin winder stopper to right.



The sewing machine is in trouble

The animation message means that the thread is twisted or jammed and the hand wheel axle cannot move. Please look through the "Trouble shooting guide" on page 65/66 to find the solution. After the problem has been solved, the machine will continue to sew.

Instruction animation message display



Bobbin winding

The bobbin winder is winding the bobbin.

WARNING FUNCTIONS

Warning beeping sound

- When operating correctly: 1 beep
- When the memory is full 20 units of pattern: 2-short beeps
- When operating incorrectly: 3-short beeps
- When the sewing machine is in trouble and can't sew: 8 seconds short beeps

It means that the thread is twisted or jammed and the hand wheel axle can't move. Please look through the "Trouble shooting guide" on page 65/66 to find the solution. After the problem has been solved, the machine will continue to sew.



Please Note: If the problem is still not solved, please contact your local dealer.

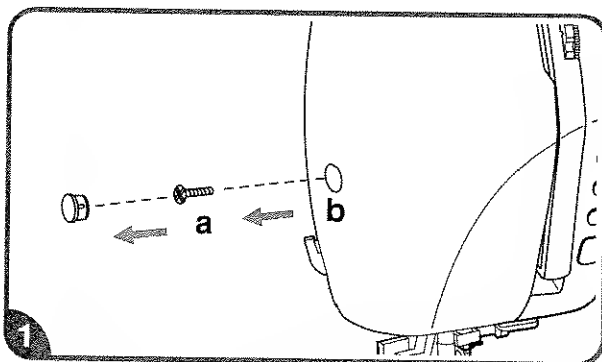


Attention: During the sewing, if the thread get jammed inside the hook stopping the needle from moving and you continue pressing the foot control, the security switch will stop the machine completely. In order to restart the sewing machine, you will have to turn the on/off switch to the "OFF" position and then "ON" again.

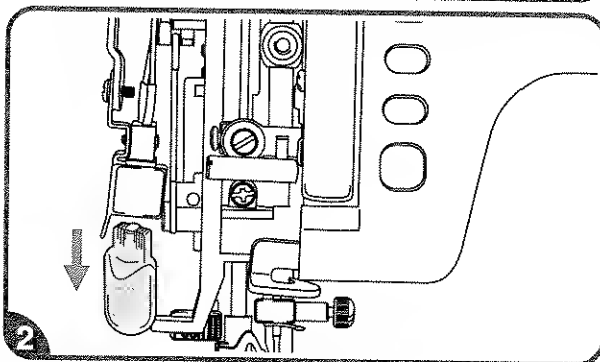
REPLACING THE LIGHT BULB



Attention: Turn the power switch off and wait until the lamp has cooled down before touching it.



1. Remove plug, loosen the screw (a) on the left side of the sewing head and remove the face plate (b).



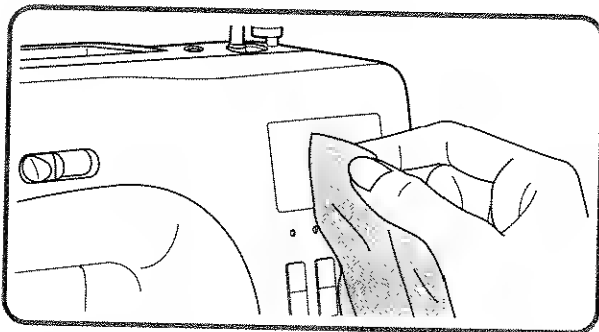
2. If the machine is equipped with a 5W lamp, replace the bulb as follows:
Pull light bulb downward to remove.
Replace the bulb with same type rated 5W.
Replace the face plate and tighten the screw.

MAINTENANCE



Attention: Disconnect the power cord from the wall socket before cleaning the screen and sewing machine surface, otherwise injury or electrical shock may result.

Cleaning the screen



If the front panel is dirty, wipe it gently with a soft, dry cloth.

Do not use any organic solvents or detergents.

Cleaning the sewing machine surface

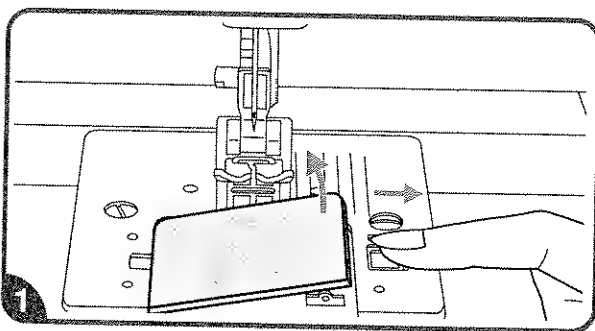
If the surface of the sewing machine is dirty, lightly soak a cloth in mild detergent, squeeze it out firmly and then wipe the surface. After cleaning it once in this way, wipe the surface again with a dry cloth.

Cleaning the hook

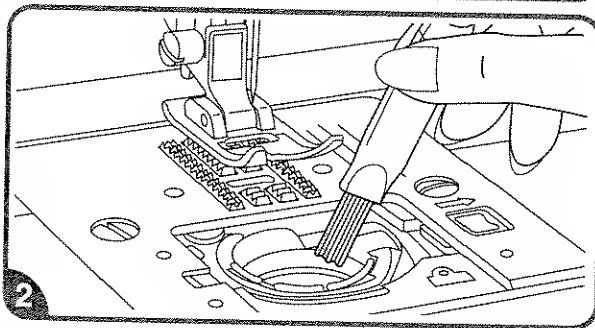
If lint and bits of thread accumulate in the hook, this will interfere with the smooth operation of the machine. Check regularly and clean the stitching mechanism when necessary.



Attention: Disconnect the machine from the wall outlet before carrying out any maintenance.

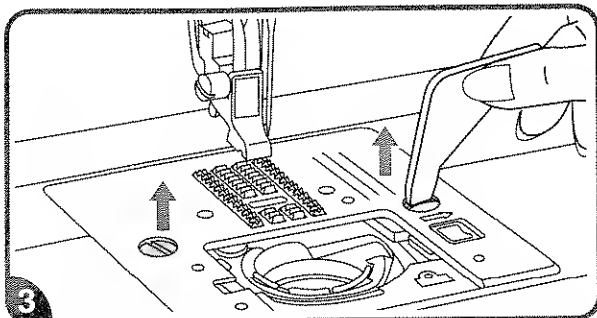


1. Remove the bobbin cover plate and bobbin.

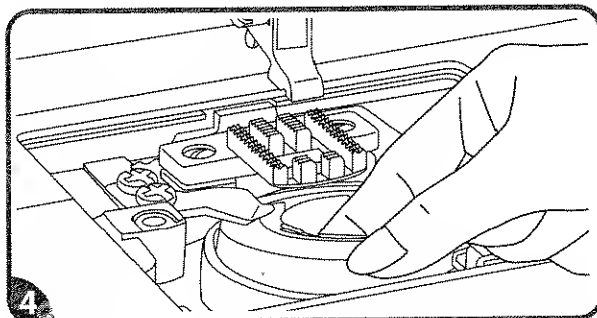


2. Clean the bobbin holder with a brush.

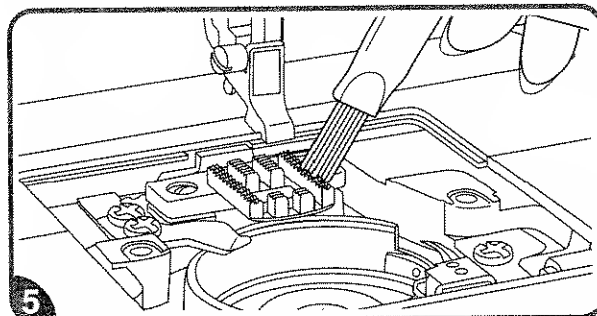
MAINTENANCE



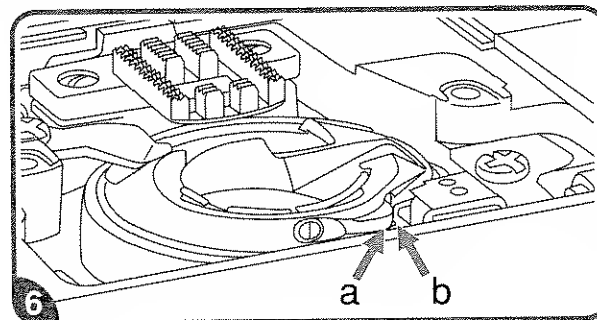
3. Remove the needle, presser foot and presser foot holder. Remove the bobbin cover plate and bobbin. Remove the screw holding the needle plate and remove the needle plate.



4. Lift up the bobbin case and remove it.



5. Clean the hook race, feed dog and bobbin case with a brush. Also clean them, using a soft, dry cloth.



6. Replace the bobbin case into the hook race so that the tip (a) fits to the stopper (b) as shown.









































TROUBLE SHOOTING GUIDE

Before calling for service, check the following items. If the problem still persists, contact the place of purchase or your nearest authorized dealer.

Problem	Cause	Correction	Reference
Upper thread breaks	1.The machine is not threaded correctly.	1.Rethread the machine.	Page 16
	2.The thread tension is too tight.	2.Reduce the thread tension (lower number).	Page 19
	3.The thread is too thick for the needle.	3.Select a larger needle.	Page 11
	4.The needle is not inserted correctly.	4.Remove and reinsert the needle (flat side towards the back).	Page 11
	5.The thread is wound around the spool holder pin.	5.Remove the reel and wind thread onto reel.	Page 16
	6.The needle is damaged.	6.Replace the needle.	Page 11
Lower thread breaks	1.The bobbin case is not inserted correctly.	1.Remove and reinsert the bobbin case and pull on the thread. The thread should pull easily.	Page 15
	2.The bobbin case is threaded wrong.	2.Check both bobbin and bobbin case.	Page 15
	3.The lower thread tension is too tight	3.Loosen lower thread tension as described.	Page 19
Skipped stitches	1.The needle is not inserted correctly.	1.Remove and reinsert needle(flat side towards the back).	Page 11
	2.The needle is damaged.	2.Insert a new needle.	Page 11
	3.The wrong size needle has been used.	3.Choose a needle to suit the thread.	Page 11
	4.The foot is not attached correctly.	4.Check and attach correctly.	Page 67
	5.The machine is not threaded correctly.	5.Rethread the machine.	Page 16
Needle breaks	1.The needle is damaged.	1.Insert a new needle.	Page 11
	2.The needle is not correctly inserted.	2.Insert the needle correctly (flat side towards the back).	Page 11
	3.Wrong needle size for the fabric.	3.Choose a needle to suit the thread and fabric.	Page 11
	4.The wrong foot is attached.	4.Select the correct foot.	Page 67
	5.The needle clamp screw is loose.	5.Use the screwdriver to firmly tighten the screw.	Page 10
	6.The presser foot that is used is not appropriate for the type of stitch that you wish to sew.	6.Attach the presser foot that is appropriate for the type of stitch that you wish to sew.	Page 67
	7.The upper thread tension is too tight.	7.Loosen the upper thread tension.	Page 19
Loose stitches	1.The machine is not correctly threaded.	1.Check the threading.	Page 16
	2.The bobbin case is not correctly threaded.	2.Thread the bobbin case as illustrated.	Page 15
	3.Needle/fabric/thread combination is wrong.	3.The needle size must suit the fabric and thread.	Page 11
	4.Thread tension is wrong.	4.Correct the thread tension.	Page 19
Seam gather or pucker	1.The needle is too thick for the fabric.	1.Select a finer needle.	Page 11
	2.The stitch length is adjusted wrong.	2.Readjust the stitch length.	Page 25
	3.The thread tension is too tight.	3.Loosen the thread tension.	Page 19











TROUBLE SHOOTING GUIDE

Problem	Cause	Correction	Reference
Seam puckering	1.The needle thread tension is too tight.	1.Lossen the thread tension.	Page 19
	2.The needle thread is not threaded correctly.	2.Rethread the machine.	Page 16
	3.The needle is too heavy for the fabric being sewn.	3.Choose a needle to suit the thread and fabric.	Page 11
	4.The stitch lenght is too long for the fabric.	4.Make stitch dense.	Page 25
Patterns are distorted	1.The correct presser foot is not used.	1.Select the correct foot.	Page 67
	2.The needle thread tension is too tight.	2.Loosen the thread tension .	Page 19
	3.The stitch length is not suitable for the fabric being sewn.	3.Make stitch adjust.	Page 25
The machine jams	1.Thread is caught in the hook.	Remove the upper thread and bobbin case, turn the handwheel backwards and forwards by hand and remove the thread remands.	Page 63
	2.The feed dogs are packed with lint.		
The machine is noisy	1.Fluff or oil have collected on the hook or needle bar.	1.Clean the hook and feed dog as described.	Page 63
	2.Poor quality oil has been used.	2.Only use good quality sewing machine oil	--
	3.The needle is damaged.	3.Replace the needle.	Page 11
	4.Slight humming sound coming from internal motor.	4.Normal	--
	5.Thread is caught in the hook.	Remove the upper thread and bobbin case, turn the handwheel backwards and forwards by hand and remove the thread remands.	Page 63
	6.The feed dogs are packed with lint.		
Uneven stitches, uneven feed	1.Poor quality thread.	1.Select a better quality thread.	Page 11
	2.The bobbin case is threaded wrong.	2.Remove the bobbin case, the thread and reinsert correctly.	Page 11
	3.Fabric has been pulled.	3.Do not pull on the fabric while sewing, let it be taken up by the machine.	--
The sewing machine doesn't operate	1.The machine is not turned on.	1.Turn on the machine.	Page 8
	2.The Start/stop button was not pressed.	2.Press the Start/stop button.	Page 22
	3.The presser foot lever is raised.	3.Lower the presser foot lever.	Page 21
	4.The Start/stop button was pressed, even through the foot controller is connected.	4.Do not use Start/stop button when the foot controller is con-nected. To use Start/stop button, disconnect the foot controller.	Page 22
	5.A thread is caught in the hook race.	5.Remove the upper thread and bobbin case, turn the handwheel backwards and forwards by hand and remove the thread remands.	Page 63
	6.The machine is not plugged in.	6.Connect the power line plug to the electric outlet.	Page 8

Stitch Pattern		Width (mm)		Length (mm)		Presser Foot	Functions					
		Auto	Manual	Auto	Manual		Reverse	Auto-lock	Elongation	Minor presser foot	Twin needle	Memory
Utility stitches	01 	3.5	0.0~7.0	2.5	0.0~4.5	T	*	*		*/T	*	*
	02 	0.0	0.0~7.0	2.5	0.0~4.5	T	*	*		*/T	*	*
	03 	3.5	0.0~7.0	2.5	1.0~3.0	T	*	*		*/T	*	*
	04 	3.5	1.0~6.0	2.5	1.0~3.0	T	*	*		*/T	*	*
	05 	3.5	0.0~7.0	2.5	1.5~3.0	T	*	*		*/T	*	*
	06 	5.0	0.0~7.0	2.0	0.3~4.5	T	*	*		*/T	*	*
	07 	5.0	2.0~7.0	1.0	0.3~4.5	T	*	*		*/T	*	*
	08 	5.0	2.5~7.0	2.5	1.0~3.0	T	*	*		*/T	*	*
	09 	5.0	3.5~7.0	2.5	1.0~3.0	E	*	*		*/T	*	*
	10 	5.0	2.5~7.0	2.5	1.0~3.0	T	*	*		*/T	*	*
	11 	3.5	2.5~7.0	2.0	0.5~4.5	F	*	*		*/T	*	*
	12 	3.5	2.5~7.0	1.0	0.5~4.5	F	*	*		*/T	*	*
	13 	3.5	2.5~7.0	2.5	1.5~3.0	T	*	*		*/T	*	*
	14 	5.0	2.5~7.0	2.5	1.0~3.0	T	*	*		*/T	*	*
	15 	7.0	2.5~7.0	2.5	1.0~3.0	A	*	*		*/A	*	*
	16 	5.0	2.5~7.0	2.5	1.0~3.0	A	*	*		*/A	*	*
Buttonhole stitches	17 	5.0	2.5~7.0	0.5	0.3~1.0	D						
	18 	5.5	3.0~7.0	0.5	0.3~1.0	D						
	19 	5.0	2.5~5.5	0.5	0.3~1.0	D						
	20 	7.0	5.5~7.0	0.5	0.3~1.0	D						
	21 	7.0	5.5~7.0	0.5	0.3~1.0	D						
	22 	7.0	5.5~7.0	0.5	0.3~1.0	D						
	23 	7.0	7.0,6.0,5.0			A						
Satin stitches	24 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	25 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	26 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	27 	7.0	3.0~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	28 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	29 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	30 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
	31 	7.0	2.5~7.0	0.5	0.3~1.0	A	*	*	*	*/A	*	*
Cross stitches	32 	5.0	2.5~7.0	2.5	1.0~3.0	A	*	*		*/A	*	*
	33 	6.0	5.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	34 	6.0	5.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	35 	4.0	3.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	36 	4.0	3.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	37 	6.0	3.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	38 	6.0	3.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	39 	6.0	3.0~7.0	1.0	1.0~3.0	A	*	*		*/A	*	*
	40 	5.0	2.5~7.0	2.5	1.0~3.0	A	*	*		*/A	*	*

*: Adjustments can be made.

QUICK ADJUSTMENT REFERENCE CHART

Stitch Pattern		Width (mm)		Length (mm)		Presser Foot	Functions					
		Auto	Manual	Auto	Manual		Reverse	Auto-lock	Elongation	Mirror Presser foot	Twist needle	Memory
Decorative stitches	41 	5.0	2.5~7.0	2.5	1.5~3.0	A	*	*		*/A	*	*
	42 	6.0	2.5~7.0	2.0	1.5~3.0	A	*	*		*/A	*	*
	43 	7.0	3.0~7.0	3.0	2.0~3.0	A	*	*		*/A	*	*
	44 	7.0	2.5~7.0	3.0	1.5~3.0	A	*	*		*/A	*	*
	45 	7.0	2.5~7.0	2.5	1.5~3.0	A	*	*		*/A	*	*
	46 	7.0	3.5~7.0	2.5	1.5~3.0	A	*	*		*/A	*	*
	47 	5.0	2.5~7.0	2.0	1.0~3.0	A	*	*		*/A	*	*
	48 	5.0	2.5~7.0	2.0	1.0~3.0	A	*	*		*/A	*	*
	49 	5.0	2.5~7.0	3.0	1.5~3.0	A	*	*		*/A	*	*
	50 	5.0	3.5~7.0	2.0	1.0~3.0	A	*	*		*/A	*	*

* : Adjustments can be made.